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(71) Applicants: DUKE UNIVERSITY [US/US]; Erwin Road, Durham, NC 27706 (US). TRIMERIS INC. [US/US]; 4727 University Drive, Durham, NC 27707-3438 (US).

(72) Inventors: BOLOGNESI, Dani, P.; 17 Harvey Place, Durham, NC 27705 (US). MATTHEWS, Thomas, J.; 5906 Newhall Road, Durham, NC 27713 (US). WILD, Cart, T.; 1702 B Vista Street, Durham, NC 27701 (US). BARNEY, Shawn, O'Lin; 106 Branchway Road, Cary, NC 27502 (US). LAMBERT, Dennis, M.; 101 Centerville Court, Cary, NC 27513 (US). PETTEWAY, Stephen, R., Jr.; 203 Le Gault Drive, Cary, NC 27513 (US). LANGLOIS, Alphonse, J.; 1720 Vista Street, Durham, NC 27701 (US).

(74) Agents: CORUZZI, Laura, A. et al.; Pennie & Edmonds, 1155 Avenue of the Americas, New York, NY 10036 (US).

(54) Title: METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION

(57) Abstract

The present invention relates to peptides which exhibit potent anti-retroviral activity. The peptides of the invention comprise DP178 (SEQ ID:1) peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} gp41 protein, and fragments, analogs and homologs of DP178. The invention further relates to the uses of such peptides as inhibitory of human and non-human retroviral, especially HIV, transmission to uninfected cells.

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METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION

This is a Continuation-In-Part of Serial No. 08/360,107 filed December 20, 1994, which is a Continuation-In-Part of Serial No. 08/255,208 filed June 7, 1994, which is a Continuation-In-Part of Serial No. 08/073,028 filed June 7, 1993, each of which is incorporated herein by reference in its entirety. This invention was made with Government support under Grant No. AI-30411-02 awarded by the National Institutes of Health. The Government has certain rights in the invention.

1. INTRODUCTION

The present invention relates, first, to DP178 (SEQ ID NO:1), a peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} transmembrane protein (TM) gp41, and portions or analogs of DP178 (SEQ ID NO:1), which exhibit anti-membrane fusion capability, antiviral activity, such as the ability to inhibit HIV transmission to uninfected CD-4^+ cells, or an ability to modulate intracellular processes involving coiled-coil peptide structures. Further, the invention relates to the use of DP178 (SEQ ID NO:1) and DP178 portions and/or analogs as antifusogenic or antiviral compounds or as inhibitors of intracellular events involving coiled-coil peptide structures. The present invention also relates to peptides analogous to DP107 (SEQ ID NO:25), a peptide corresponding to amino acids 558 to 595 of the HIV-1_{LAI} transmembrane protein (TM) gp41, having amino acid sequences present in other viruses, such as enveloped viruses, and/or other organisms, and further relates to the uses of such peptides. These peptides exhibit anti-membrane fusion capability, antiviral activity, or the ability to

modulate intracellular processes involving coiled-coil peptide structures. The present invention additionally relates to methods for identifying compounds that disrupt the interaction between DP178 and DP107, and/or between DP107-like and DP178-like peptides. Further, the invention relates to the use of the peptides of the invention as diagnostic agents. For example, a DP178 peptide may be used as an HIV subtype-specific diagnostic. The invention is demonstrated, first, by way of an Example wherein DP178 (SEQ ID:1), and a peptide whose sequence is homologous to DP178 are each shown to be potent, non-cytotoxic inhibitors of HIV-1 transfer to uninfected CD-4$^+$ cells. The invention is further demonstrated by Examples wherein peptides having structural and/or amino acid motif similarity to DP107 and DP178 are identified in a variety of viral and nonviral organisms, and in examples wherein a number of such identified peptides derived from several different viral systems are demonstrated to exhibit antiviral activity.

2. BACKGROUND OF THE INVENTION

2.1 MEMBRANE FUSION EVENTS

Membrane fusion is a ubiquitous cell biological process (for a review, see White, J.M., 1992, Science 258:917-924). Fusion events which mediate cellular housekeeping functions, such as endocytosis, constitutive secretion, and recycling of membrane components, occur continuously in all eukaryotic cells.

Additional fusion events occur in specialized cells. Intracellularly, for example, fusion events are involved in such processes as occur in regulated exocytosis of hormones, enzymes and neurotransmitters.

Intercellularly, such fusion events feature prominently in, for example, sperm-egg fusion and myoblast fusion.

Fusion events are also associated with disease states. For example, fusion events are involved in the formation of giant cells during inflammatory reactions, the entry of all enveloped viruses into cells, and, in the case of human immunodeficiency virus (HIV), for example, are responsible for the virally induced cell-cell fusion which leads to cell death.

2.2. THE HUMAN IMMUNODEFICIENCY VIRUS

The human immunodeficiency virus (HIV) has been implicated as the primary cause of the slowly degenerative immune system disease termed acquired immune deficiency syndrome (AIDS) (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo, R. et al., 1984, Science 224:500-503). There are at least two distinct types of HIV: HIV-1 (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo R. et al., 1984, Science 224:500-503) and HIV-2 (Clavel, F. et al., 1986, Science 233:343-346; Guyader, M. et al., 1987, Nature 326:662-669). Further, a large amount of genetic heterogeneity exists within populations of each of these types. Infection of human CD-4$^+$ T-lymphocytes with an HIV virus leads to depletion of the cell type and eventually to opportunistic infections, neurological dysfunctions, neoplastic growth, and ultimately death.

HIV is a member of the lentivirus family of retroviruses (Teich, N. et al., 1984, RNA Tumor Viruses, Weiss, R. et al., eds., CSH-Press, pp. 949-956). Retroviruses are small enveloped viruses that contain a diploid, single-stranded RNA genome, and

replicate via a DNA intermediate produced by a virally-encoded reverse transcriptase, an RNA-dependent DNA polymerase (Varmus, H., 1988, Science 240:1427-1439). Other retroviruses include, for example, oncogenic viruses such as human T-cell leukemia viruses (HTLV-I,-II,-III), and feline leukemia virus.

The HIV viral particle consists of a viral core, composed of capsid proteins, that contains the viral RNA genome and those enzymes required for early replicative events. Myristylated Gag protein forms an outer viral shell around the viral core, which is, in turn, surrounded by a lipid membrane enveloped derived from the infected cell membrane. The HIV enveloped surface glycoproteins are synthesized as a single 160 Kd precursor protein which is cleaved by a cellular protease during viral budding into two glycoproteins, gp41 and gp120. gp41 is a transmembrane protein and gp120 is an extracellular protein which remains non-covalently associated with gp41, possibly in a trimeric or multimeric form (Hammarskjold, M. and Rekosh, D., 1989, Biochem. Biophys. Acta 989:269-280).

HIV is targeted to CD-4$^+$ cells because the CD-4 cell surface protein acts as the cellular receptor for the HIV-1 virus (Dalgleish, A. et al., 1984, Nature 312:763-767; Klatzmann et al., 1984, Nature 312:767-768; Maddon et al., 1986, Cell 47:333-348). Viral entry into cells is dependent upon gp120 binding the cellular CD-4$^+$ receptor molecules (McDougal, J.S. et al., 1986, Science 231:382-385; Maddon, P.J. et al., 1986, Cell 47:333-348) and thus explains HIV's tropism for CD-4$^+$ cells, while gp41 anchors the enveloped glycoprotein complex in the viral membrane.

2.3. HIV TREATMENT

HIV infection is pandemic and HIV associated diseases represent a major world health problem. Although considerable effort is being put into the successful design of effective therapeutics, currently no curative anti-retroviral drugs against AIDS exist. In attempts to develop such drugs, several stages of the HIV life cycle have been considered as targets for therapeutic intervention (Mitsuya, H. et al., 1991, FASEB J. 5:2369-2381). For example, virally encoded reverse transcriptase has been one focus of drug development. A number of reverse-transcriptase-targeted drugs, including 2',3'-dideoxynucleoside analogs such as AZT, ddI, ddC, and d4T have been developed which have been shown to been active against HIV (Mitsuya, H. et al., 1991, Science 249:1533-1544). While beneficial, these nucleoside analogs are not curative, probably due to the rapid appearance of drug resistant HIV mutants (Lander, B. et al., 1989, Science 243:1731-1734). In addition, the drugs often exhibit toxic side effects such as bone marrow suppression, vomiting, and liver function abnormalities.

Attempts are also being made to develop drugs which can inhibit viral entry into the cell, the earliest stage of HIV infection. Here, the focus has thus far been on CD4, the cell surface receptor for HIV. Recombinant soluble CD4, for example, has been shown to inhibit infection of $CD\text{-}4^+$ T-cells by some HIV-1 strains (Smith, D.H. et al., 1987, Science 238:1704-1707). Certain primary HIV-1 isolates, however, are relatively less sensitive to inhibition by recombinant CD-4 (Daar, E. et al., 1990, Proc. Natl. Acad. Sci. USA 87:6574-6579). In addition,

recombinant soluble CD-4 clinical trials have produced inconclusive results (Schooley, R. et al., 1990, Ann. Int. Med. 112:247-253; Kahn, J.O. et al., 1990, Ann. Int. Med. 112:254-261; Yarchoan, R. et al., 1989, Proc. Vth Int. Conf. on AIDS, p. 564, MCP 137).

The late stages of HIV replication, which involve crucial virus-specific secondary processing of certain viral proteins, have also been suggested as possible anti-HIV drug targets. Late stage processing is dependent on the activity of a viral protease, and drugs are being developed which inhibit this protease (Erickson, J., 1990, Science 249:527-533). The clinical outcome of these candidate drugs is still in question.

Attention is also being given to the development of vaccines for the treatment of HIV infection. The HIV-1 enveloped proteins (gp160, gp120, gp41) have been shown to be the major antigens for anti-HIV antibodies present in AIDS patients (Barin, et al., 1985, Science 228:1094-1096). Thus far, therefore, these proteins seem to be the most promising candidates to act as antigens for anti-HIV vaccine development. To this end, several groups have begun to use various portions of gp160, gp120, and/or gp41 as immunogenic targets for the host immune system. See for example, Ivanoff, L. et al., U.S. Pat. No. 5,141,867; Saith, G. et al., WO 92/22,654; Shafferman, A., WO 91/09,872; Formoso, C. et al., WO 90/07,119. Clinical results concerning these candidate vaccines, however, still remain far in the future.

Thus, although a great deal of effort is being directed to the design and testing of anti-retroviral drugs, a truly effective, non-toxic treatment is still needed.

3. SUMMARY OF THE INVENTION

The present invention relates, first, to DP178 (SEQ ID:1), a 36-amino acid synthetic peptide corresponding to amino acids 638 to 673 of the transmembrane protein (TM) gp41 from the HIV-1 isolate LAI (HIV-1_{LAI}), which exhibits potent anti-HIV-1 activity. As evidenced by the Example presented below, in Section 6, the DP178 (SEQ ID:1) antiviral activity is so high that, on a weight basis, no other known anti-HIV agent is effective at concentrations as low as those at which DP178 (SEQ ID:1) exhibits its inhibitory effects.

The invention further relates to those portions and analogs of DP178 which also show such antiviral activity, and/or show anti-membrane fusion capability, or an ability to modulate intracellular processes involving coiled-coil peptide structures. The term "DP178 analog" refers to a peptide which contains an amino acid sequence corresponding to the DP178 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and/or organisms other than HIV-1_{LAI}. Such DP178 analog peptides may, therefore, correspond to DP178-like amino acid sequences present in other viruses, such as, for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such analogous DP178 peptides may also correspond to DP178-like amino acid sequences present in nonviral organisms.

The invention further relates to peptides DP107 (SEQ ID NO:25) analogs. DP107 is a peptide corresponding to amino acids 558-595 of the HIV-1_{LAI} transmembrane protein (TM) gp41. The term "DP107 analog" as used herein refers to a peptide which contains an amino acid sequence corresponding to the

DP107 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and organisms other than HIV-1_{LAI}. Such DP107 analog peptides may, therefore, correspond to DP107-like amino acid sequences present in other viruses, such as, for for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such DP107 analog peptides may also correspond to DP107-like amino acid sequences present in nonviral organisms.

Further, the peptides of the invention include DP107 analog and DP178 analog peptides having amino acid sequences recognized or identified by the 107x178x4, ALLMOTI5 and/or PLZIP search motifs described herein.

The peptides of the invention may, for example, exhibit antifusogenic activity, antiviral activity, and/or may have the ability to modulate intracellular processes which involve coiled-coil peptide structures. With respect to the antiviral activity of the peptides of the invention, such an antiviral activity includes, but is not limited to the inhibition of HIV transmission to uninfected CD-4^+ cells. Additionally, the antifusogenic capability, antiviral activity or intracellular modulatory activity of the peptides of the invention merely requires the presence of the peptides of the invention, and, specifically, does not require the stimulation of a host immune response directed against such peptides.

The peptides of the invention may be used, for example, as inhibitors of membrane fusion-asociated events, such as, for example, the inhibition of human and non-human retroviral, especially HIV, transmission to uninfected cells. It is further contemplated that

the peptides of the invention may be used as modulators of intracellular events involving coiled-coil peptide structures.

The peptides of the invention may, alternatively, be used to identify compounds which may themselves exhibit antifusogenic, antiviral, or intracellular modulatory activity. Additional uses include, for example, the use of the peptides of the invention as organism or viral type and/or subtype-specific diagnostic tools.

The terms "antifusogenic" and "anti-membrane fusion", as used herein, refer to an agent's ability to inhibit or reduce the level of membrane fusion events between two or more moieties relative to the level of membrane fusion which occurs between said moieties in the absence of the peptide. The moieties may be, for example, cell membranes or viral structures, such as viral envelopes or pili. The term "antiviral", as used herein, refers to the compound's ability to inhibit viral infection of cells, via, for example, cell-cell fusion or free virus infection. Such infection may involve membrane fusion, as occurs in the case of enveloped viruses, or some other fusion event involving a viral structure and a cellular structure (e.g., such as the fusion of a viral pilus and bacterial membrane during bacterial conjugation).

It is also contemplated that the peptides of the invention may exhibit the ability to modulate intracellular events involving coiled-coil peptide structures. "Modulate", as used herein, refers to a stimulatory or inhibitory effect on the intracellular process of interest relative to the level or activity of such a process in the absence of a peptide of the invention.

Embodiments of the invention are demonstrated below wherein an extremely low concentration of DP178 (SEQ ID:1), and very low concentrations of a DP178 homolog (SEQ ID:3) are shown to be potent inhibitors of HIV-1 mediated CD-4$^+$ cell-cell fusion (i.e., syncytial formation) and infection of CD-4$^+$ cells by cell-free virus. Further, it is shown that DP178 (SEQ ID:1) is not toxic to cells, even at concentrations 3 logs higher than the inhibitory DP-178 (SEQ ID:1) concentration.

The present invention is based, in part, on the surprising discovery that the DP107 and DP178 domains of the HIV gp41 protein non-covalently complex with each other, and that their interaction is required for the normal infectivity of the virus. This discovery is described in the Example presented, below, in Section 8. The invention, therefore, further relates to methods for identifying antifusogenic, including antiviral, compounds that disrupt the interaction between DP107 and DP178, and/or between DP107-like and DP178-like peptides.

Additional embodiments of the invention (specifically, the Examples presents in Sections 9-16 and 19-25, below) are demonstrated, below, wherein peptides, from a variety of viral and nonviral sources, having structural and/or amino acid motif similarity to DP107 and DP178 are identified, and search motifs for their identification are described. Further, Examples (in Sections 17, 18, 25-29) are presented wherein a number of the peptides of the invention are demonstrated exhibit substantial antiviral activity or activity predictive of antiviral activity.

3.1. DEFINITIONS

Peptides are defined herein as organic compounds comprising two or more amino acids covalently joined by peptide bonds. Peptides may be referred to with respect to the number of constituent amino acids, i.e., a dipeptide contains two amino acid residues, a tripeptide contains three, etc. Peptides containing ten or fewer amino acids may be referred to as oligopeptides, while those with more than ten amino acid residues are polypeptides. Such peptides may also include any of the modifications and additional amino and carboxy groups as are described herein.

Peptide sequences defined herein are represented by one-letter symbols for amino acid residues as follows:

A (alanine)
R (arginine)
N (asparagine)
D (aspartic acid)
C (cysteine)
Q (glutamine)
E (glutamic acid)
G (glycine)
H (histidine)
I (isoleucine)
L (leucine)
K (lysine)
M (methionine)
F (phenylalanine)
P (proline)
S (serine)
T (threonine)
W (tryptophan)
Y (tyrosine)
V (valine)

4. BRIEF DESCRIPTION OF THE FIGURES

FIG. 1. Amino acid sequence of DP178 (SEQ ID:1) derived from HIV_{LAI}; DP178 homologs derived from $HIV\text{-}1_{SF2}$ (DP-185; SEQ ID:3), $HIV\text{-}1_{RF}$ (SEQ ID:4), and $HIV\text{-}1_{MN}$ (SEQ ID:5); DP178 homologs derived from amino acid sequences of two prototypic HIV-2 isolates, namely, $HIV\text{-}2_{rod}$ (SEQ ID:6) and $HIV\text{-}2_{NIHZ}$ (SEQ ID:7); control peptides: DP-180 (SEQ ID:2), a peptide incorporating the amino acid residues of DP178 in a scrambled sequence; DP-118 (SEQ ID:10) unrelated to DP178, which inhibits HIV-1 cell free virus infection; DP-125 (SEQ ID:8), unrelated to DP178, also inhibits HIV-1 cell free virus infection; DP-116 (SEQ ID:9), unrelated to DP178, is negative for inhibition of HIV-1 infection when tested using a cell-free virus infection assay. Throughout the figures, the one letter amino acid code is used.

FIG. 2. Inhibition of HIV-1 cell-free virus infection by synthetic peptides. IC_{50} refers to the concentration of peptide that inhibits RT production from infected cells by 50% compared to the untreated control. Control: the level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

FIG. 3. Inhibition of HIV-1 and HIV-2 cell-free virus infection by the synthetic peptide DP178 (SEQ ID:1). IC_{50}: concentration of peptide that inhibits RT production by 50% compared to the untreated control. Control: Level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

FIG. 4A-4B. Fusion Inhibition Assays. FIG 4A: DP178 (SEQ ID:1) inhibition of HIV-1 prototypic isolate-mediated syncytial formation; data represents the number of virus-induced syncytial per cell. FIG.

4B: DP-180 (SEQ ID:2) represents a scrambled control peptide; DP-185 (SEQ ID:3) represents a DP178 homolog derived from HIV-1_{SF2} isolate; Control, refers to the number of syncytial produced in the absence of peptide.

FIG. 5. Fusion inhibition assay: HIV-1 vs. HIV-2. Data represents the number of virus-induced syncytial per well. ND: not done.

FIG. 6. Cytotoxicity study of DP178 (SEQ ID:1) and DP-116 (SEQ ID:9) on CEM cells. Cell proliferation data is shown.

FIG. 7. Schematic representation of HIV-gp41 and maltose binding protein (MBP)-gp41 fusion proteins. DP107 and DP178 are synthetic peptides based on the two putative helices of gp41. The letter P in the DP107 boxes denotes an Ile to Pro mutation at amino acid number 578. Amino acid residues are numbered according to Meyers et al., "Human Retroviruses and AIDS", 1991, Theoret. Biol. and Biophys. Group, Los Alamos Natl. Lab., Los Alamos, NM. The proteins are more fully described, below, in Section 8.1.1.

FIG. 8. A point mutation alters the conformation and anti-HIV activity of M41.

FIG. 9. Abrogation of DP178 anti-HIV activity. Cell fusion assays were carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41PΔ178.

FIG. 10. Binding of DP178 to leucine zipper of gp41 analyzed by FAb-D ELISA.

FIG. 11A-B. Models for a structural transition in the HIV-1 TM protein. Two models are proposed which indicate a structural transition from a native oligomer to a fusogenic state following a trigger event (possibly gp120 binding to CD4). Common

features of both models include (1) the native state is held together by noncovalent protein-protein interactions to form the heterodimer of gp120/41 and other interactions, principally though gp41 interactive sites, to form homo-oligomers on the virus surface of the gp120/41 complexes; (2) shielding of the hydrophobic fusogenic peptide at the N-terminus (F) in the native state; and (3) the leucine zipper domain (DP107) exists as a homo-oligomer coiled coil only in the fusogenic state. The major differences in the two models include the structural state (native or fusogenic) in which the DP107 and DP178 domains are complexed to each other. In the first model (FIG. 11A) this interaction occurs in the native state and in the second (FIG. 11B), it occurs during the fusogenic state. When triggered, the fusion complex in the model depicted in (A) is generated through formation of coiled-coil interactions in homologous DP107 domains resulting in an extended α-helix. This conformational change positions the fusion peptide for interaction with the cell membrane. In the second model (FIG. 11B), the fusogenic complex is stabilized by the association of the DP178 domain with the DP107 coiled-coil.

FIG. 12. Motif design using heptad repeat positioning of amino acids of known coiled-coils.

FIG. 13. Motif design using proposed heptad repeat positioning of amino acids of DP107 and DP178.

FIG. 14. Hybrid motif design crossing GCN4 and DP107.

FIG. 15. Hybrid motif design crossing GCN4 and DP178.

FIG. 16. Hybrid motif design 107x178x4, crossing DP107 and DP178. This motif was found to be

the most consistent at identifying relevant DP107-like and DP178-like peptide regions.

FIG. 17. Hybrid motif design crossing GCN4, DP107, and DP178.

FIG. 18. Hybrid motif design ALLMOTI5 crossing GCN4, DP107, DP178, c-Fos c-Jun, c-Myc, and Flu Loop 36.

FIG. 19. PLZIP motifs designed to identify N-terminal proline-leucine zipper motifs.

FIG. 20. Search results for HIV-1 (BRU isolate) enveloped protein gp41. Sequence search motif designations: Spades (♠): 107x178x4; Hearts (♥) ALLMOTI5; Clubs (♣): PLZIP; Diamonds (♦): transmembrane region (the putative transmembrane domains were identified using a PC/Gene program designed to search for such peptide regions). Asterisk (*): Lupas method. The amino acid sequences identified by each motif are bracketed by the respective characters. Representative sequences chosen based on 107x178x4 searches are underlined and in bold. DP107 and DP178 sequences are marked, and additionally double-underlined and italicized.

FIG. 21. Search results for human respiratory syncytial virus (RSV) strain A2 fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 22. Search results for simian immunodeficiency virus (SIV) enveloped protein gp41 (AGM3 isolate). Sequence search motif designations are as in FIG. 20.

FIG. 23. Search results for canine distemper virus (strain Onderstepoort) fusion glycoprotein 1. Sequence search motif designations are as in FIG. 20.

FIG. 24. Search results for newcastle disease virus (strain Australia-Victoria/32) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 25. Search results for human parainfluenza 3 virus (strain NIH 47885) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 26. Search results for influenza A virus (strain A/AICHI/2/68) hemagglutinin precursor HA2. Sequence search designations are as in FIG. 20.

FIG. 27A-D. Respiratory Syncytial Virus (RSV) peptide antiviral and circular dichroism data. FIG. 27A-B: Peptides derived from the F2 DP178/DP107-like region. Antiviral and CD data. FIG. 27C-D: Peptides derived from the F1 DP107-like region. Peptide and CD data.

Antiviral activity (AV) is represented by the following qualitative symbols:

"-", negative antiviral activity;

"+/-", antiviral activity at greater than 100μg/ml;

"+", antiviral activity at between 50-100μg/ml;

"++", antiviral activity at between 20-50μg/ml;

"+++", antiviral activity at between 1-20μg/ml;

"++++", antiviral activity at <1μg/ml.

CD data, referring to the level of helicity is represented by the following qualitative symbol:

"-", no helicity;

"+", 25-50% helicity;

"++", 50-75% helicity;

"+++"' 75-100% helicity.

IC_{50} refers to the concentration of peptide necessary to produce only 50% of the number of syncytial relative to infected control cultures

containing no peptide. IC_{50} values were obtained using purified peptides only.

FIG. 28A-B. Respiratory Syncytial Virus (RSV) DP178-like region (F1) peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. IC_{50} values were obtained using purified peptides only.

FIG. 29A-B. Peptides derived from the HPIV3 F1 DP107-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

FIG. 30A-B. Peptides derived from the HPIV3 F1 DP178-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

FIG. 31. Motif search results for simian immunodeficiency virus (SIV) isolate MM251, enveloped polyprotein gp41. Sequence search designations are as in FIG. 20.

FIG. 32. Motif search results for Epstein-Barr Virus (Strain B95-8), glycoprotein gp110 precursor (designated gp115). BALF4. Sequence search designations are as in FIG. 20.

FIG. 33. Motif search results for Epstein-Barr Virus (Strain B95-8), BZLF1 trans-activator protein (designated EB1 or Zebra). Sequence search designations are as in FIG. 20. Additionally, "@" refers to a well known DNA binding domain and "+" refers to a well known dimerization domain, as defined

by Flemington and Speck (Flemington, E. and Speck, S.H., 1990, Proc. Natl. Acad. Sci. USA 87:9459-9463).

FIG. 34. Motif search results for measles virus (strain Edmonston), fusion glycoprotein F1. Sequence search designations are as in FIG. 20.

FIG. 35. Motif search results for Hepatitis B Virus (Subtype AYW), major surface antigen precursor S. Sequence search designations are as in FIG. 20.

FIG. 36. Motif search results for simian Mason-Pfizer monkey virus, enveloped (TM) protein gp20. Sequence search designations are as in FIG. 20.

FIG. 37. Motif search results for Pseudomonas aerginosa, fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

FIG. 38. Motif search results for Neisseria gonorrhoeae fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

FIG. 39. Motif search results for Hemophilus influenzae fimbrial protein. Sequence search designations are as in FIG. 20.

FIG. 40. Motif search results for Staphylococcus aureus, toxic shock syndrome toxin-1. Sequence search designations are as in FIG. 20.

FIG. 41. Motif search results for Staphylococcus aureus enterotoxin Type E. Sequence search designations are as in FIG. 20.

FIG. 42. Motif search results for Staphylococcus aureus enterotoxin A. Sequence search designations are as in FIG. 20.

FIG. 43. Motif search results for Escherichia coli, heat labile enterotoxin A. Sequence search designations are as in FIG. 20.

FIG. 44. Motif search results for human c-fos proto-oncoprotein. Sequence search designations are as in FIG. 20.

FIG. 45. Motif search results for human lupus KU autoantigen protein P70. Sequence search designations are as in FIG. 20.

FIG. 46. Motif search results for human zinc finger protein 10. Sequence search designations are as in FIG. 20.

FIG. 47. Measles virus (MeV) fusion protein DP178-like region antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. IC_{50} values were obtained using purified peptides.

FIG. 48. Simian immunodeficiency virus (SIV) TM (fusion) protein DP178-like region antiviral data. Antiviral symbols are as in FIG. 27A-D "NT", not tested.

FIG. 49A-C. DP178-derived peptide antiviral data. The peptides listed herein were derived from the region surrounding the HIV-1 BRU isolate DP178 region (e.g., gp41 amino acid residues 615-717).

In instances where peptides contained DP178 point mutations, the mutated amino acid residues are shown with a shaded background. In instances in which the test peptide has had an amino and/or carboxy-terminal group added or removed (apart from the standard amido- and acetyl- blocking groups found on such peptides), such modifications are indicated. FIG. 49A: The column to the immediate right of the name of the test peptide indicates the size of the test peptide and points out whether the peptide is derived from a one amino acid peptide "walk" across the DP178 region. The next column to the right indicates whether the test peptide contains a point mutation, while the column to its right indicates whether certain amino acid residues have been added to or removed from the DP178-derived amino acid sequence. FIG 49B: The column to the immediate right of the test peptide name

indicates whether the peptide represents a DP178 truncation, the next column to the right points out whether the peptide contains a point mutation, and the column to its right indicates whether the peptide contains amino acids which have been added to or removed from the DP178 sequence itself. FIG. 49C: The column to the immediate right of the test peptide name indicates whether the test peptide contains a point mutation, while the column to its right indicates whether amino acid residues have been added to or removed from the DP178 sequence itself. IC_{50} is as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

FIG. 50. DP107 and DP107 gp41 region truncated peptide antiviral data. IC_{50} as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

FIG. 51A-B. Epstein-Barr virus Strain B95-8 BZLF1 DP178/DP107 analog region peptide walks and electrophoretic mobility shift assay results. The peptides (T-423 to T-446, FIG. 51A; T-447 to T-461, FIG. 51B) represent one amino acid residue "walks" through the EBV Zebra protein region from amino acid residue 173 to 246.

The amino acid residue within this region which corresponds to the first amino acid residue of each peptide is listed to the left of each peptide, while the amino acid residue within this region which corresponds to the last amino acid residue of each peptide is listed to the right of each peptide. The

length of each test peptide is listed at the far right of each line, under the heading "Res".

"ACT" refers to a test peptide's ability to inhibit Zebra binding to its response element. "+" refers to a visible, but incomplete, abrogation of the response element/Zebra homodimer complex; "+++" refers to a complete abrogation of the complex; and "-" represents a lack of complex disruption.

FIG. 52A-B. Hepatitis B virus subtype AYW major surface antigen precursor S protein DP178/DP107 analog region and peptide walks. 52A depicts Domain I (S protein amino acid residues 174-220), which contains a potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain I. 52B depicts Domain II (S protein amino acid residues 233-291), which contains a second potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain II.

5. DETAILED DESCRIPTION OF THE INVENTION

Described herein are peptides which may exhibit antifusogenic activity, antiviral capability, and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. The peptides described include, first, DP178 (SEQ ID NO:1), a gp41-derived 36 amino acid peptide and fragments and analogs of DP178.

In addition, the peptides of the invention described herein include peptides which are DP107 analogs. DP107 (SEQ ID NO:25) is a 38 amino acid peptide corresponding to residues 558 to 595 of the HIV-1_{LAI} transmembrane (TM) gp41 protein. Such DP107 analogs may exhibit antifusogenic capability, antiviral activity or an ability to modulate

intracellular processes involving coiled-coil structures.

Further, peptides of the invention include DP107 and DP178 are described herein having amino acid sequences recognized by the 107x178x4, ALLMOTI5, and PLZIP search motifs. Such motifs are also discussed.

Also described here are antifusogenic, antiviral, intracellular modulatory, and diagnostic uses of the peptides of the invention. Further, procedures are described for the use of the peptides of the invention for the identification of compounds exhibiting antifusogenic, antiviral or intracellular modulatory activity.

While not limited to any theory of operation, the following model is proposed to explain the potent anti-HIV activity of DP178, based, in part, on the experiments described in the Examples, infra. In the HIV protein, gp41, DP178 corresponds to a putative α-helix region located in the C-terminal end of the gp41 ectodomain, and appears to associate with a distal site on gp41 whose interactive structure is influenced by the leucine zipper motif, a coiled-coil structure, referred to as DP107. The association of these two domains may reflect a molecular linkage or "molecular clasp" intimately involved in the fusion process. It is of interest that mutations in the C-terminal α-helix motif of gp41 (i.e., the D178 domain) tend to enhance the fusion ability of gp41, whereas mutations in the leucine zipper region (i.e., the DP107 domain) decrease or abolish the fusion ability of the viral protein. It may be that the leucine zipper motif is involved in membrane fusion while the C-terminal α-helix motif serves as a molecular safety to regulate the availability of the leucine zipper during virus-induced membrane fusion.

On the basis of the foregoing, two models are proposed of gp41-mediated membrane fusion which are schematically shown in FIG. 11A-B. The reason for proposing two models is that the temporal nature of the interaction between the regions defined by DP107 and DP178 cannot, as yet, be pinpointed. Each model envisions two conformations for gp41 - one in a "native" state as it might be found on a resting virion. The other in a "fusogenic" state to reflect conformational changes triggered following binding of gp120 to CD4 and just prior to fusion with the target cell membrane. The strong binding affinity between gp120 and CD4 may actually represent the trigger for the fusion process obviating the need for a pH change such as occurs for viruses that fuse within intracellular vesicles. The two major features of both models are: (1) the leucine zipper sequences (DP107) in each chain of oligomeric enveloped are held apart in the native state and are only allowed access to one another in the fusogenic state so as to form the extremely stable coiled-coils, and (2) association of the DP178 and DP107 sites as they exist in gp41 occur either in the native or fusogenic state. FIG. 11A depicts DP178/DP107 interaction in the native state as a molecular clasp. On the other hand, if one assumes that the most stable form of the enveloped occurs in the fusogenic state, the model in FIG. 11B can be considered.

When synthesized as peptides, both DP107 and DP178 are potent inhibitors of HIV infection and fusion, probably by virtue of their ability to form complexes with viral gp41 and interfere with its fusogenic process; e.g., during the structural transition of the viral protein from the native structure to the fusogenic state, the DP178 and DP107

peptides may gain access to their respective binding sites on the viral gp41, and exert a disruptive influence. DP107 peptides which demonstrate anti-HIV activity are described in Applicants' co-pending application Serial No. 08/264,531, filed June 23, 1994, which is incorporated by reference herein in its entirety.

As shown in the Examples, infra, a truncated recombinant gp41 protein corresponding to the ectodomain of gp41 containing both DP107 and DP178 domains (excluding the fusion peptide, transmembrane region and cytoplasmic domain of gp41) did not inhibit HIV-1 induced fusion. However, when a single mutation was introduced to disrupt the coiled-coil structure of the DP107 domain -- a mutation which results in a total loss of biological activity of DP107 peptides -- the inactive recombinant protein was transformed to an active inhibitor of HIV-1 induced fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107 domain.

For clarity of discussion, the invention will be described primarily for DP178 peptide inhibitors of HIV. However, the principles may be analogously applied to other viruses, both enveloped and nonenveloped, and to other non-viral organisms.

5.1. DP178 AND DP178-LIKE PEPTIDES

The DP178 peptide (SEQ ID:1) of the invention corresponds to amino acid residues 638 to 673 of the transmembrane protein gp41 from the HIV-1_{LAI} isolate, and has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:1)

In addition to the full-length DP178 (SEQ ID:1) 36-mer, the peptides of the invention may include truncations of the DP178 (SEQ ID:1) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. Truncations of DP178 (SEQ ID:1) peptides may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide), as shown in Tables I and IA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE I
DP178 (SEQ ID:1) CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSL-Z
X-YTSLI-Z
X-YTSLIH-Z
X-YTSLIHS-Z
X-YTSLIHSL-Z
X-YTSLIHSLI-Z
X-YTSLIHSLIE-Z
X-YTSLIHSLIEE-Z
X-YTSLIHSLIEES-Z
X-YTSLIHSLIEESQ-Z
X-YTSLIHSLIEESQN-Z
X-YTSLIHSLIEESQNQ-Z
X-YTSLIHSLIEESQNQQ-Z
X-YTSLIHSLIEESQNQQE-Z
X-YTSLIHSLIEESQNQQEK-Z
X-YTSLIHSLIEESQNQQEKN-Z
X-YTSLIHSLIEESQNQQEKNE-Z
X-YTSLIHSLIEESQNQQEKNEQ-Z
X-YTSLIHSLIEESQNQQEKNEQE-Z
X-YTSLIHSLIEESQNQQEKNEQEL-Z
X-YTSLIHSLIEESQNQQEKNEQELL-Z
X-YTSLIHSLIEESQNQQEKNEQELLE-Z
X-YTSLIHSLIEESQNQQEKNEQELLEL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELD-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDK-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWA-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWN-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IA
DP178 (SEQ ID:1) AMINO TRUNCATIONS

X-NWF-Z
X-WNWF-Z
X-LWNWF-Z
X-SLWNWF-Z
X-ASLWNWF-Z
X-WASLWNWF-Z
X-KWASLWNWF-Z
X-DKWASLWNWF-Z
X-LDKWASLWNWF-Z
X-ELDKWASLWNWF-Z
X-LELDKWASLWNWF-Z
X-LLELDKWASLWNWF-Z
X-ELLELDKWASLWNWF-Z
X-QELLELDKWASLWNWF-Z
X-EQELLELDKWASLWNWF-Z
X-NEQELLELDKWASLWNWF-Z
X-KNEQELLELDKWASLWNWF-Z
X-EKNEQELLELDKWASLWNWF-Z
X-QEKNEQELLELDKWASLWNWF-Z
X-QQEKNEQELLELDKWASLWNWF-Z
X-NQQEKNEQELLELDKWASLWNWF-Z
X-QNQQEKNEQELLELDKWASLWNWF-Z
X-SQNQQEKNEQELLELDKWASLWNWF-Z
X-ESQNQQEKNEQELLELDKWASLWNWF-Z
X-EESQNQQEKNEQELLELDKWASLWNWF-Z
X-IEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-HSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-IHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP178-like peptides. "DP178-like", as used herein, refers, first, to DP178 and DP178 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-178-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP178. The DP178-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP178-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP178-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP178 peptides of the invention. Utilizing the DP178 and DP178 analog sequences described herein, the skilled artisan can readily compile DP178 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP178 or DP178 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP178 region of the gp41 protein.

Deletions of DP178 (SEQ ID:1) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP178 or DP178-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are further described, below, in Section 5.3.

5.2. DP107 AND DP107-LIKE PEPTIDES

Further, the peptides of the invention include peptides having amino acid sequences corresponding to DP107 analogs. DP107 is a 38 amino acid peptide which exhibits potent antiviral activity, and corresponds to residues 558 to 595 of HIV-1_{LAI} transmembrane (TM) gp41 protein, as shown here:

NH_2-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-COOH
(SEQ ID:25)

In addition to the full-length DP107 (SEQ ID:25) 38-mer, the peptides of the invention may include truncations of the DP107 (SEQ ID:25) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes

involving coiled-coil peptide structures. Truncations of DP107 (SEQ ID:25) peptides may comprise peptides of between 3 and 38 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 38-mer polypeptide), as shown in Tables II and IIA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE II
DP107 (SEQ ID:25) CARBOXY TRUNCATIONS

X-NNL-Z
X-NNLL-Z
X-NNLLR-Z
X-NNLLRA-Z
X-NNLLRAI-Z
X-NNLLRAIE-Z
X-NNLLRAIEA-Z
X-NNLLRAIEAQ-Z
X-NNLLRAIEAQQ-Z
X-NNLLRAIEAQQH-Z
X-NNLLRAIEAQQHL-Z
X-NNLLRAIEAQQHLL-Z
X-NNLLRAIEAQQHLLQ-Z
X-NNLLRAIEAQQHLLQL-Z
X-NNLLRAIEAQQHLLQLT-Z
X-NNLLRAIEAQQHLLQLTV-Z
X-NNLLRAIEAQQHLLQLTVW-Z
X-NNLLRAIEAQQHLLQLTVWQ-Z
X-NNLLRAIEAQQHLLQLTVWQI-Z
X-NNLLRAIEAQQHLLQLTVWQIK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQAR-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARI-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARIL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAV-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVE-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVER-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERY-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKD-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IIA
DP178 (SEQ ID:25) AMINO TRUNCATIONS

X-KDQ- Z
X-LKDQ- Z
X-YLKDQ- Z
X-RYLKDQ- Z
X-ERYLKDQ- Z
X-VERYLKDQ- Z
X-AVERYLKDQ- Z
X-LAVERYLKDQ- Z
X-ILAVERYLKDQ- Z
X-RILAVERYLKDQ- Z
X-ARILAVERYLKDQ- Z
X-QARILAVERYLKDQ- Z
X-LQARILAVERYLKDQ- Z
X-QLQARILAVERYLKDQ- Z
X-KQLQARILAVERYLKDQ- Z
X-IKQLQARILAVERYLKDQ- Z
X-QIKQLQARILAVERYLKDQ- Z
X-WQIKQLQARILAVERYLKDQ- Z
X-VWQIKQLQARILAVERYLKDQ- Z
X-TVWQIKQLQARILAVERYLKDQ- Z
X-LTVWQIKQLQARILAVERYLKDQ- Z
X-QLTVWQIKQLQARILAVERYLKDQ- Z
X-LQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLQLTVWQIKQLQARILAVERYLKDQ- Z
X-HLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-EAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-IEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-RAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP107-like peptides. "DP107-like", as used herein, refers, first, to DP107 and DP107 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-107-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP107. The DP107-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP107-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP107-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP107 peptides of the invention. Utilizing the DP107 and DP107 analog sequences described herein, the skilled artisan can readily compile DP107 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP107 or DP107 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP107 (SEQ.ID:25) or DP107 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP107 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP107 region of the gp41 protein.

Deletions of DP107 (SEQ ID:25) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP107 or DP107-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP107 (SEQ.ID:25) or DP107 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP107 and DP107 truncations are more fully described in Applicants' co-pending U.S. Patent Application Ser. No. 08/374,666, filed January 27, 1995, and which is incorporated herein by reference in its entirety. DP107 analogs are further described, below, in Section 5.3.

5.3. DP107 and DP178 ANALOGS

Peptides corresponding to analogs of the DP178, DP178 truncations, DP107 and DP107 truncation sequences of the invention, described, above, in Sections 5.1 and 5.2 may be found in other viruses, including, for example, non-HIV-1_{LAI} enveloped viruses, non-enveloped viruses and other non-viral organisms.

The term "analog", as used herein, refers to a peptide which is recognized or identified via the 107x178x4, ALLMOTI5 and/or PLZIP search strategies discussed below. Further, such peptides may exhibit antifusogenic capability, antiviral activity, or the

ability to modulate intracellular processes involving coiled-coil structures.

Such DP178 and DP107 analogs may, for example, correspond to peptide sequences present in TM proteins of enveloped viruses and may, additionally correspond to peptide sequences present in non enveloped and non-viral organisms. Such peptides may exhibit antifusogenic activity, antiviral activity, most particularly antiviral activity which is specific to the virus in which their native sequences are found, or may exhibit an ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are peptides whose amino acid sequences are comprised of the amino acid sequences of peptide regions of, for example, other (i.e., other than HIV-1_{LAI}) viruses that correspond to the gp41 peptide region from which DP178 (SEQ ID:1) was derived. Such viruses may include, but are not limited to, other HIV-1 isolates and HIV-2 isolates. DP178 analogs derived from the corresponding gp41 peptide region of other (i.e., non HIV-1_{LAI}) HIV-1 isolates may include, for example, peptide sequences as shown below.

NH_2-YTNTIYTLLEESQNQQEKNEQELLELDKWASLWNWF-COOH (DP-185; SEQ ID:3);

NH_2-YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF-COOH (SEQ ID:4);

NH_2-YTSLIYSLLEKSQIQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:5).

SEQ ID:3 (DP-185), SEQ ID:4, and SEQ ID:5 are derived from HIV-1_{SF2}, HIV-1_{RF}, and HIV-1_{MN} isolates, respectively. Underlined amino acid residues refer to those residues that differ from the corresponding position in the DP178 (SEQ ID:1) peptide. One such

DP178 analog, DP-185 (SEQ ID:3), is described in the Example presented in Section 6, below, where it is demonstrated that DP-185 (SEQ ID:3) exhibits antiviral activity. The DP178 analogs of the invention may also include truncations, as described above. Further, the analogs of the invention modifications such those described for DP178 analogs in Section 5.1., above. It is preferred that the DP178 analogs of the invention represent peptides whose amino acid sequences correspond to the DP178 region of the gp41 protein, it is also contemplated that the peptides of the invention may, additionally, include amino sequences, ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 amino acid sequence.

Striking similarities, as shown in FIG. 1, exist within the regions of HIV-1 and HIV-2 isolates which correspond to the DP178 sequence. A DP178 analog derived from the HIV-2_{NIHZ} isolate has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-COOH (SEQ ID:7)

Table III and Table IV show some possible truncations of the HIV-2_{NIHZ} DP178 analog, which may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide). Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a

covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE III

HIV-2_{NIHZ} DP178 analog carboxy truncations.

X-LEA-Z
X-LEAN-Z
X-LEANI-Z
X-LEANIS-Z
X-LEANISQ-Z
X-LEANISQS-Z
X-LEANISQSL-Z
X-LEANISQSLE-Z
X-LEANISQSLEQ-Z
X-LEANISQSLEQA-Z
X-LEANISQSLEQAQ-Z
X-LEANISQSLEQAQI-Z
X-LEANISQSLEQAQIQ-Z
X-LEANISQSLEQAQIQQ-Z
X-LEANISQSLEQAQIQQE-Z
X-LEANISQSLEQAQIQQEK-Z
X-LEANISQSLEQAQIQQEKN-Z
X-LEANISQSLEQAQIQQEKNM-Z
X-LEANISQSLEQAQIQQEKNMY-Z
X-LEANISQSLEQAQIQQEKNMYE-Z
X-LEANISQSLEQAQIQQEKNMYEL-Z
X-LEANISQSLEQAQIQQEKNMYELQ-Z
X-LEANISQSLEQAQIQQEKNMYELQK-Z
X-LEANISQSLEQAQIQQEKNMYELQKL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNS-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWD-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDV-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVF-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFT-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IV

HIV-2_{NIH2} DP178 analog amino truncations.

X-NWL-Z
X-TNWL-Z
X-FTNWL-Z
X-VFTNWL-Z
X-DVFTNWL-Z
X-WDVFTNWL-Z
X-SWDVFTNWL-Z
X-NSWDVFTNWL-Z
X-LNSWDVFTNWL-Z
X-KLNSWDVFTNWL-Z
X-QKLNSWDVFTNWL-Z
X-LQKLNSWDVFTNWL-Z
X-ELQKLNSWDVFTNWL-Z
X-YELQKLNSWDVFTNWL-Z
X-MYELQKLNSWDVFTNWL-Z
X-NMYELQKLNSWDVFTNWL-Z
X-KNMYELQKLNSWDVFTNWL-Z
X-EKNMYELQKLNSWDVFTNWL-Z
X-QEKNMYELQKLNSWDVFTNWL-Z
X-QQEKNMYELQKLNSWDVFTNWL-Z
X-IQQEKNMYELQKLNSWDVFTNWL-Z
X-QIQQEKNMYELQKLNSWDVFTNWL-Z
X-AQIQQEKNMYELQKLNSWDVFTNWL-Z
X-QAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-EQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-LEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-SLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-QSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-SQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-ISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-NISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-ANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-EANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

DP178 and DP107 analogs are recognized or identified, for example, by utilizing one or more of the 107x178x4, ALLMOTI5 or PLZIP computer-assisted search strategies described and demonstrated, below, in the Examples presented in Sections 9 through 16 and 19 through 25. The search strategy identifies additional peptide regions which are predicted to have structural and/or amino acid sequence features similar to those of DP107 and/or DP178.

The search strategies are described fully, below, in the Example presented in Section 9. While this search strategy is based, in part, on a primary amino acid motif deduced from DP107 and DP178, it is not based solely on searching for primary amino acid sequence homologies, as such protein sequence homologies exist within, but not between major groups of viruses. For example, primary amino acid sequence homology is high within the TM protein of different strains of HIV-1 or within the TM protein of different isolates of simian immunodeficiency virus (SIV). Primary amino acid sequence homology between HIV-1 and SIV, however, is low enough so as not to be useful. It is not possible, therefore, to find peptide regions similar to DP107 or DP178 within other viruses, or within non-viral organisms, whether structurally, or otherwise, based on primary sequence homology, alone.

Further, while it would be potentially useful to identify primary sequence arrangements of amino acids based on, for example, the physical chemical characteristics of different classes of amino acids rather than based on the specific amino acids themselves, such search strategies have, until now, proven inadequate. For example, a computer algorithm designed by Lupas et al. to identify coiled-coil propensities of regions within proteins (Lupas, A., et al., 1991 Science 252:1162-1164) is inadequate for

identifying protein regions analogous to DP107 or DP178.

Specifically, analysis of HIV-1 gp160 (containing both gp120 and gp41) using the Lupas algorithm does not identify the coiled-coil region within DP107. It does, however, identify a region within DP178 beginning eight amino acids N-terminal to the start of DP178 and ending eight amino acids from the C-terminus. The DP107 peptide has been shown experimentally to form a stable coiled coil. A search based on the Lupas search algorithm, therefore, would not have identified the DP107 coiled-coil region. Conversely, the Lupas algorithm identified the DP178 region as a potential coiled-coil motif. However, the peptide derived from the DP178 region failed to form a coiled coil in solution.

A possible explanation for the inability of the Lupas search algorithm to accurately identify coiled-coil sequences within the HIV-1 TM, is that the Lupas algorithm is based on the structure of coiled coils from proteins that are not structurally or functionally similar to the TM proteins of viruses, antiviral peptides (e.g. DP107 and DP178) of which are an object of this invention.

The computer search strategy of the invention, as demonstrated in the Examples presented below, in Sections 9 through 16 and 19 through 25, successfully identifies regions of proteins similar to DP107 or DP178. This search strategy was designed to be used with a commercially-available sequence database package, preferably PC/Gene.

A series of search motifs, the 107x178x4, ALLMOTI5 and PLZIP motifs, were designed and engineered to range in stringency from strict to broad, as discussed in this Section and in Section 9, with 107x178x4 being preferred. The sequences

identified via such search motifs, such as those listed in Tables V-XIV, below, potentially exhibit antifusogenic, such as antiviral, activity, may additionally be useful in the identification of antifusogenic, such as antiviral, compounds, and are intended to be within the scope of the invention.

Coiled-coiled sequences are thought to consist of heptad amino acid repeats. For ease of description, the amino acid positions within the heptad repeats are sometimes referred to as A through G, with the first position being A, the second B, etc. The motifs used to identify DP107-like and DP178-like sequences herein are designed to specifically search for and identify such heptad repeats. In the descriptions of each of the motifs described, below, amino acids enclosed by brackets , i.e., [], designate the only amino acid residues that are acceptable at the given position, while amino acids enclosed by braces, i.e., {}, designate the only amino acids which are unacceptable at the given heptad position. When a set of bracketed or braced amino acids is followed by a number in parentheses i.e., (), it refers to the number of subsequent amino acid positions for which the designated set of amino acids hold, e.g, a (2) means "for the next two heptad amino acid positions".

The ALLMOTI5 is written as follows:

{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-

Translating this motif, it would read: "at the first (A) position of the heptad, any amino acid residue except C, D, G, H, or P is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, or P is acceptable, at the fourth heptad position (D), any amino acid residue except C,

D, G, H, or P is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, or P is acceptable. This motif is designed to search for five consecutive heptad repeats (thus the repeat of the first line five times), meaning that it searches for 35-mer sized peptides. It may also be designed to search for 28-mers, by only repeating the initial motif four times. With respect to the ALLMOTI5 motif, a 35-mer search is preferred. Those viral (non-bacteriophage) sequences identified via such an ALLMOTI5 motif are listed in Table V, below, at the end of this Section. The viral sequences listed in Table V potentially exhibit antiviral activity, may be useful in the the identification of antiviral compounds, and are intended to be within the scope of the invention. In those instances wherein a single gene exhibits greater than one sequence recognized by the ALLMOTI5 search motif, the amino a cid residue numbers of these sequences are listed under "Area 2", Area 3", etc. This convention is used for each of the Tables listed, below, at the end of this Section.

The 107x178x4 motif is written as follows:

[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-

Translating this motif, it would read: "at the first (A) position of the heptad, only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, M or P is acceptable, at the fourth position (D), only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, M or P is acceptable. This motif is designed to search for

four consecutive heptad repeats (thus the repeat of the first line four times), meaning that it searches for 28-mer sized peptides. It may also be designed to search for 35-mers, by repeating the initial motif five times. With respect to the 107x178x4 motif, a 28-mer search is preferred.

Those viral (non-bacteriophage) sequences identified via such a 107x178x4 motif are listed in Table VI, below, at the end of this Section, with those viral (non-bacteriophage) sequences listed in Table VII, below at the end of this Section, being preferred.

The 107x178x4 search motif was also utilized to identify non-viral procaryotic protein sequences, as listed in Table VIII, below, at the end of this Section. Further, this search motif was used to reveal a number of human proteins. The results of this human protein 107x178x4 search is listed in Table IX, below, at the end of this Section. The sequences listed in Tables VIII and IX, therefore, reveal peptides which may be useful as antifusogenic compounds or in the identification of antifusogenic compounds, and are intended to be within the scope of the invention.

The PLZIP series of motifs are as listed in FIG. 19. These motifs are designed to identify leucine zipper coiled-coil like heptads wherein at least one proline residue is present at some predefined distance N-terminal to the repeat. These PLZIP motifs find regions of proteins with similarities to HIV-1 DP178 generally located just N-terminal to the transmembrane anchor. These motifs may be translated according to the same convention described above. Each line depicted in FIG. 19 represents a single, complete search motif. "X" in these motifs refers to any amino acid residue. In instances wherein a motif contains

two numbers within parentheses, this refers to a variable number of amino acid residues. For example, X (1,12) is translated to "the next one to twelve amino acid residues, inclusive, may be any amino acid".

Tables X through XIV, below, at the end of this Section, list sequences identified via searches conducted with such PLZIP motifs. Specifically, Table X lists viral sequences identified via PCTLZIP, P1CTLZIP and P2CTLZIP search motifs, Table XI lists viral sequences identified via P3CTLZIP, P4CTLZIP, P5CTLZIP and P6CTLZIP search motifs, Table XII lsts viral sequences identified via P7CTLZIP, P8CTLZIP and P9CTLZIP search motifs, Table XIII lists viral sequences identified via P12LZIPC searches and Table XIV lists viral sequences identified via P23TLZIPC search motifs The viral sequences listed in these tables represent peptides which potentially exhibit antiviral activity, may be useful in the identification of antiviral compounds, and are intended to be within the scope of the invention.

The Examples presented in Sections 17, 18, 26 and 27 below, demonstrate that viral sequences identified via the motif searches described herein identify substantial antiviral characteristics. Specifically, the Example presented in Section 17 describes peptides with anti-respiratory syncytial virus activity, the Example presented in Section 18 describes peptides with anti-parainfluenza virus activity, the Example presented in Section 26 describes peptides with anti-measles virus activity and the Example presented in Section 27 describes peptides with anti-simian immunodeficiency virus activity.

The DP107 and DP178 analogs may, further, contain any of the additional groups described for DP178, above, in Section 5.1. For example, these peptides

may include any of the additional amino-terminal groups as described above for "X" groups, and may also include any of the carboxy-terminal groups as described, above, for "Z" groups.

Additionally, truncations of the identified DP107 and DP178 peptides are among the peptides of the invention. Further, such DP107 and DP178 analogs and DP107/DP178 analog truncations may exhibit one or more amino acid substitutions, insertion, and/or deletions. The DP178 analog amino acid substitutions, insertions and deletions, are as described, above, for DP178-like peptides in Section 5.1. The DP-107 analog amino acid substitutions, insertions and deletions are also as described, above, for DP107-like peptides in Section 5.2.

Tables XV through XXII, below, present representative examples of such DP107/DP178 truncations. Specifically, Table XV presents Respiratory Syncytial Virus F1 region DP107 analog carboxy truncations, Table XVI presents Respiratory Syncytial Virus F1 region DP107 analog amino truncations, Table XVII presents Respiratory Syncytial Virus F1 region DP178 analog carboxy truncations, Table XVIII presents Respiratory Syncytial Virus F1 region DP178 analog amino truncations, Table XIX presents Human Parainfluenza Virus 3 F1 region DP178 analog carboxy truncations, Table XX presents Human Parainfluenza Virus 3 F1 region DP178 analog amino truncations, Table XXI presents Human Parainfluenza Virus 3 F1 region DP107 analog carboxy truncations and Table XXII presents Human Parainfluenza Virus 3 F1 region DP107 analog amino truncations. Further, Table XXIII, below, presents DP107/DP178 analogs and analog truncations which exhibit substantial antiviral activity. These antiviral peptides are grouped according to the specific virus which they inhibit,

including respiratory syncytial virus, human parainfluenza virus 3, simian immunodeficiency virus and measles virus.

TABLE V

ALLMOTI5 SEARCH RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
CDLNAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
P170K_TRVPS	POTENTIAL 170 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	113-153							
P194K_TRVSY	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	144-178	214-248	391-446	644-678	1045-1079	1135-1176	1135-1176	1135-1176
P55KD_HSV6U	55.8 KD PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	228-262							
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	3-48	100-144						
PAANT_HDVD3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE D380)	7-48	100-144						
PAANT_HDVIT	DELTA ANTIGEN (ALPHA ANTIGEN)	HEPATITIS DELTA VIRUS (ISOLATE ITALIAN)	3-48	100-144						
PAANT_HDVL1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE LEBANON-1)	3-48							
PAANT_HDVM1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE M-1)	3-48	100-144						
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE M-2)	3-48	100-144						
PAANT_HDVNA	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE NAURU)	3-48	100-144						
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-1)	1-49	100-144						
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-2)	1-49	100-144						
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE WOODCHUCK)	3-48	100-144						
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438)	71-110							
PATII_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	14-57	420-564	570-625					
PATII_VARV	81 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	425-525	531-565	571-628					
PATI2_HSV11	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	304-345							
PATI2_HSV1F	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	102-139	304-345						
PATI2_HSVEB	ALPHA TRANS-INDUCING FACTOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-147	268-331						
PATI2_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	79-124	219-263						
PATI2_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	79-124							
PATI2_VZVD	ALPHA TRANS-INDUCING FACTOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	298-361	395-429						
PATI3_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	51-95							
PATIN_HSV23	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	178-219	324-381						
PATIN_HSV2H	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	177-222	324-381						
PATIN_HSVBP	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1	195-256							
PATIN_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1	241-289							
PATIN_VZVD	ALPHA TRANS-INDUCING PROTEIN (	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	206-252							
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-57	426-526	532-566	572-629	803-989	1106-1150		
PBDL2_EBV	PROTEIN BDLF2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-131							
PBRL1_EBV	TRANSCRIPTION ACTIVATOR BRLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-187							
PCOA1_POVBA	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	159-195							
PCOA1_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	109-143							
PCOA2_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	141-213							
PCOA2_POVBA	COAT PROTEIN VP2	POLYOMAVIRUS BK (STRAIN AS)	14-64	317-351						
PCOA2_POVBK	COAT PROTEIN VP2	POLYOMAVIRUS BK	14-64	317-351						
PCOA2_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	35-76	153-216						
PCOA2_POVHA	COAT PROTEIN VP2	HAMSTER POLYOMAVIRUS	7-48	174-208						
PCOA2_POVJC	COAT PROTEIN VP2	POLYOMAVIRUS JC	14-64	233-267						
PCOA2_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	14-78	156-206						
PCOA2_POVMJ	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN J)	5-72	137-185						
PCOA2_POVMA	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVMC	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVMX	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	15-56	177-211						
PCOA2_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	14-62	228-262	318-352					
PCOAT_ABMVW	COAT PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA	180-214							
PCOAT_ACLSV	COAT PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	154-188							
PCOAT_AEDEV	COAT PROTEIN VP1	AEDES DENSONUCLEOSIS VIRUS	243-284							
PCOAT_AMCV	COAT PROTEIN	ARTICHOKE MOTTLED CRINKLE VIRUS	36-70	100-134						
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	89-123							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PCOAT_BMV	COAT PROTEIN	BROME MOSAIC VIRUS	36-73							
PCOAT_BYDV1	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVM	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVP	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_BYDVR	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN	56-90	186-223						
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	186-223						
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	185-222						
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	13-51							
PCOAT_CCMV	COAT PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	141-178							
PCOAT_CERV	PROBABLE COAT PROTEIN	CARNATION ETCHED RING VIRUS	192-226							
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	393-435							
PCOAT_CLVK	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CMVFC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVI	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVP6	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVQ	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVWL	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVY	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-365							
PCOAT_CSMV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	184-218							
PCOAT_CTV36	COAT PROTEIN	CITRUS TRISTEZA VIRUS	79-120							
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	162-204							
PCOAT_EPMV	COAT PROTEIN	EGGPLANT MOSAIC VIRUS	40-74							
PCOAT_FCVC6	COAT PROTEIN	FELINE CALICIVIRUS	432-466	566-600						
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS	502-550	566-600						
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS	519-553	569-603						
PCOAT_FMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS	144-199	206-247	449-483					
PCOAT_FXMV	COAT PROTEIN	FOXTAIL MOSAIC VIRUS	168-220							
PCOAT_IRV1	CAPSID PROTEIN	TIPULA IRIDESCENT VIRUS	90-124							
PCOAT_IRV22	CAPSID PROTEIN	SIMULIUM IRIDESCENT VIRUS	90-124							
PCOAT_IRV6	CAPSID PROTEIN	CHILO IRIDESCENT VIRUS	51-85							
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	32-70	255-289						
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	7-76	84-121						
PCOAT_MSVK	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVN	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVS	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	105-139							
PCOAT_PAVBO	COAT PROTEIN VP2	BOVINE PARVOVIRUS	380-414	444-480						
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS	497-531							
PCOAT_PEBV	COAT PROTEIN	PEA EARLY BROWNING VIRUS	73-114							
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS	36-81							
PCOAT_PPMVS	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS	104-138							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS	38-72	251-292						
PCOAT_PYMVV	COAT PROTEIN	POTATO YELLOW MOSAIC VIRUS	190-224							
PCOAT_RBDV	COAT PROTEIN	RASPBERRY BUSHY DWARF VIRUS	10-44	140-199						
PCOAT_RCNMV	COAT PROTEIN	RED CLOVER NECROTIC MOSAIC VIRUS	272-306							
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	34-68	83-120	259-309					
PCOAT_SLCV	COAT PROTEIN	SQUASH LEAF CURL VIRUS	190-224							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PCOAT_SMWLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	66-100							
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-166							
PCOAT_STNV1	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 1	2-50							
PCOAT_STNV2	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 2	38-72							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	7-55							
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	14-48							
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	1-37	43-77						
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	44-78	100-134						
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	12-46							
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	186-220							
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	103-137							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	76-138							
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TRVCA	COAT PROTEIN	TOBACCO RATTLE VIRUS	71-109							
PCOAT_TRVTC	COAT PROTEIN	TOBACCO RATTLE VIRUS	69-103							
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS	2-36							
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_WCMVO	COAT PROTEIN	WHITE CLOVER MOSAIC VIRUS	163-197							
PCORA_HPBGS	CORE ANTIGEN	GROUND SQUIRREL HEPATITIS VIRUS	94-135							
PCORA_HPBV9	CORE ANTIGEN	HEPATITIS B VIRUS	111-149							
PCORA_WHV1	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 1	62-106							
PCORA_WHV8	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 8	62-106							
PD250_ASFB7	PROTEIN D250R	AFRICAN SWINE FEVER VIRUS	198-232							
PDNB2_ADE02	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	291-336							
PDNB2_ADE05	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 5	291-336							
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS	235-252	718-752	974-1009	1027-1068				
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS	338-372	1013-1070						
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSVB2	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2	552-591	599-633	1048-1131					
PDNBI_HSVE1	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	273-314							
PDNBI_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	617-658	1107-1148						
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI	222-259	330-367	506-557	873-907				
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS	584-618	987-1125						
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS	525-562							
PDNBI_VZVD	MAJOR DNA-BINDING PROTEIN	VARICELLA-ZOSTER VIRUS	613-650	1041-1077						
PDNLI_ASFM2	DNA LIGASE	AFRICAN SWINE FEVER VIRUS	72-106							
PDNLI_VACCC	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNLI_VACCV	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	395-436							
PDPOL_ADE02	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	667-743							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	667-743							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	733-809							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS	665-741							
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	33-64	202-240						
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	247-284							
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	247-284							
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	17-51	80-114	371-412					
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	753-787	1033-1074						
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39							
PDPOL_HPBD8	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	5-39							
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39	297-338						
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE SJ	291-325							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	5-39	224-265	557-595					
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	201-235							
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	511-559							
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	511-559							
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI	511-559							
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	511-559							
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	512-560							
PDPOL_HSV21	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	494-528							
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	33-67	328-366	401-435	706-749	808-858			
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)	595-646							
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	627-683	770-818	828-862					
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	627-683	770-818	828-862					
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	626-682	769-817	827-861					
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	473-533							
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	285-326							
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	290-331							
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331							
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	289-330							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	290-331							
PDPOL_WHV8I	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	201-235							
PDPOM_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	135-169							
PDUT_HSVEB	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P	179-223							
PDUT_HSV5A	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	HERPESVIRUS SAIMIRI (STRAIN 11)	107-141							
PE1A_ADE41	EARLY E1A 27 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	102-166							
PE1BL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	103-137							
PE1BS_ADE02	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 2	103-137							
PE1BS_ADE05	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 5	96-131							
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	100-134							
PE1BS_ADE40	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	100-134							
PE1BS_ADE41	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 41	119-173							
PE1BS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	2-39							
PE3I4_ADE02	EARLY E3B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	8-49							
PE3I4_ADE03	EARLY E3 15.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	2-39							
PE3I4_ADE05	EARLY E3 14.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	7-48							
PE3I4_ADE07	EARLY E3 15.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	70-107							
PE3I20_ADE35	EARLY E3 20.3 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	125-169							
PE3I21_ADE35	EARLY E3 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	10-44							
PE4I1_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	10-44							
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	122-157							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	487-521							
PEBN4_EBV	EBNA-4 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	23-71	307-341						
PEFT1_VARV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS								

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-375							
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-378							
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	420-472							
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	426-478							
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	390-456							
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	10-44	88-122	221-255	530-610	635-691			
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	10-44	88-122	159-193	250-284	559-639	664-724		
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-379							
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-379							
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-379							
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	304-379							
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-379							
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-379							
PENV_CAEVC	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	157-196	615-720	751-785	847-895				
PENV_CAEVG	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	154-193	611-718	749-783	845-893				
PENV_EIAV1	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-1)	39-76	436-525	559-593	658-716				
PENV_EIAV2	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-2)	39-76	436-525	559-593	658-692				
PENV_EIAV3	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-3)	39-76	436-525	559-593	658-716				
PENV_EIAV5	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-5)	38-76	437-526	560-594	659-693				
PENV_EIAV9	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	39-76	436-525	559-593	658-716				
PENV_EIAVC	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	39-76	436-525	559-593	658-716				
PENV_EIAVW	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	39-76	436-525	559-593	658-716				
PENV_EIAVY	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	39-76	436-525	559-593	658-716				
PENV_FENVI	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	503-555	567-604						
PENV_FIVPB	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	610-690	715-756						
PENV_FIVSD	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	601-688	713-754						
PENV_FIVT2	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	60-122	609-689	714-755					
PENV_FLVC6	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	497-549	561-595						
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	478-530	542-576						
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	498-550	562-596						
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	475-527	539-573						
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	1-41	154-205	321-355	563-693	866-903			
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	498-550	562-596						
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	478-530	542-576						
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	481-524	545-579						
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	498-532							
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	523-575	587-621						
PENV_HTL1A	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	321-383							
PENV_HTL1C	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	316-383							
PENV_HTL1M	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	321-383							
PENV_HTLV2	ENV POLYPROTEIN PRECURSOR	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	317-377							
PENV_HV1A2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	497-593	612-711	766-845					
PENV_HV1B1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	505-594	610-712	767-843					
PENV_HV1B8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	500-589	605-707	762-838					
PENV_HV1BN	ENVELOPE POLYPROTEIN GP160 PRECURSOR (CON	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	331-365	501-590	609-708	763-831				
PENV_HV1BR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	510-599	615-717	772-841					
PENV_HV1C4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	342-376	510-606	626-724	779-855				
PENV_HV1EL	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	255-296	502-591	607-709	768-829				
PENV_HV1H2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	505-594	610-712	767-836					
PENV_HV1H3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	505-594	610-712	767-843					
PENV_HV1J3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	343-377	517-605	622-723	778-843				
PENV_HV1JR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	329-363	497-586	603-704	759-835				

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PENV_HV1KB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	88-122	338-372	511-545	555-599	618-677	681-718	772-845	
PENV_HV1MA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	259-300	507-596	617-714	770-825				
PENV_HV1MF	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	503-592	622-710	765-841					
PENV_HV1MN	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	336-370	506-595	617-713	774-841				
PENV_HV1NS	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	326-360							
PENV_HV1ND	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	495-584	601-702	757-825				
PENV_HV1OY	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	336-370	497-593	610-711	766-842				
PENV_HV1PV	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	505-594	610-712	767-843					
PENV_HV1RH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	344-378	507-603	619-721	776-852				
PENV_HV1S1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	496-585	602-703	758-830					
PENV_HV1S3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	332-366	494-590	607-708	763-837				
PENV_HV1SC	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	331-365	498-594	611-712	767-834				
PENV_HV1W1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	331-365	498-594	611-712	767-836				
PENV_HV1W2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	327-361	489-584	602-703	758-827				
PENV_HV1Z2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLAT	255-296	502-591	610-709	764-831				
PENV_HV1Z3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-292							
PENV_HV1Z6	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-297	504-593	609-711	766-840				
PENV_HV1Z8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	266-307	512-601	617-675	682-719	774-831			
PENV_HV1ZH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLA	522-594	612-671	675-712	777-839				
PENV_HV2BE	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	447-481	510-595	617-680					
PENV_HV2CA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	512-597	619-709						
PENV_HV2D1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	501-586	608-698						
PENV_HV2G1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	439-473	502-587	609-699					
PENV_HV2NZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	488-587	609-699						
PENV_HV2RO	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	511-596	618-708						
PENV_HV2S2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24.1C#	442-476	505-590	612-702					
PENV_HV2SB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	526-588	614-700						
PENV_HV2ST	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	505-590	612-702					
PENV_IPMAE	ENV POLYPROTEIN PRECURSOR	MOUSE INTRACISTERNAL A-PARTICLE	367-422	465-527						
PENV_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	403-455	571-605						
PENV_MCFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-525	537-571						
PENV_MCFF3	ENV POLYPROTEIN PRECURSOR (COAT POLYPROTE	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLA	474-526	538-572						
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	503-555	567-601						
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	498-550	562-596						
PENV_MLVF5	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	520-564	576-610						
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD29)	520-564	576-610						
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	520-564	576-610						
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOMULV MURINE LEUKEMIA VIRUS	504-551	563-597						
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-92	104-138						
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	502-554	566-600						
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	497-549	561-595						
PENV_MLVRK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-549	561-595						
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	477-539	556-612						
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	477-539	556-612						
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	408-474							
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	43-95	107-141						
PENV_OMVV3	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	22-64	185-223	664-746	780-816				
PENV_RMCFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	484-528	540-574						
PENV_RSFFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER SPLEEN FOCUS-FORMING VIRUS	342-376							
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	1-41	101-140	154-205	321-355	563-651	658-693	1866-904	
PENV_SFV3L	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	5-46	158-209	319-357	560-706	863-901			
PENV_SIVAI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	269-310	551-623	643-691					

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PENV_SIVAG	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	556-628	651-699	808-852					
PENV_SIVAI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	257-291	336-370	535-607	627-684	792-840			
PENV_SIVAT	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	264-298	549-621	644-692	796-833				
PENV_SIVCZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	253-291	330-365	512-584	669-703	803-837			
PENV_SIVGB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	566-654	677-725						
PENV_SIVM1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	114-151	465-506	528-613	635-725	809-844			
PENV_SIVM2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	71-109	161-219	245-286					
PENV_SIVMK	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	464-505	549-612	638-724					
PENV_SIVML	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	464-505	540-612	638-724					
PENV_SIVS4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMM4 ISOLATE)	466-509	517-616	618-728	812-853				
PENV_SIVSP	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/DC13 ISOLATE)	470-513	521-620	642-732	811-848				
PENV_SMRVH	ENV POLYPROTEIN PRECURSOR	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	400-466							
PENV_SRVI	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	409-475							
PENV_VILV	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514)	21-62	184-222	637-740	773-809				
PENV_VILV1	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	21-62	184-222	643-746	780-816				
PENV_VILV2	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	21-62	184-222	645-748	782-818				
PERBA_AVIER	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	106-140							
PETF1_FOWP1	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	190-224	353-387						
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	37-71	267-340	550-587					
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-71	307-341						
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	23-71	307-341						
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	52-97	174-208						
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	52-97	174-208						
PEXON_HCMVA	ALKALINE EXONUCLEASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-114							
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-141							
PEXON_PRVNJ	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	82-120							
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-157	342-383						
PFIB2_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	182-237							
PFIB2_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	182-223							
PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	156-194							
PFIBP_ADE07	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 7	176-210							
PFIBP_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352							
PFIBP_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	320-366							
PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	181-215	585-626						
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	131-169							
PFOS_AVINK	P55-V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24	109-152							
PFOS_MSVFB	P55-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	155-193							
PGAGC_AVISC	P47(GAG-CRK) PROTEIN	AVIAN SARCOMA VIRUS (STRAIN CT10)	57-101							
PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	57-94							
PGAG_AVEV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	6-43							
PGAG_AVMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	57-94							
PGAG_AVMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS HB1	57-94							
PGAG_AVISU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	57-94							
PGAG_AVISY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	57-94							
PGAG_BIV06	GAG POLYPROTEIN (P53)	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	1-41							
PGAG_EIAVY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	61-118							
PGAG_FIVPE	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	76-110							
PGAG_FIVSD	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	76-110							
PGAG_FIVT2	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	76-110							
PGAG_FLV	GAG POLYPROTEIN	FELINE LEUKEMIA VIRUS	496-537							
PGAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	130-186	391-425	439-480	607-655				
PGAG_FSVMD	GAG POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	499-534							

PCGENE	ALLMOTIS	AB Viruses (ab bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
ID NAME	PROTEIN	VIRUS	57-94						
PGAG_FUSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	393-444						
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS							
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	87-133	294-328					
PGAG_HV1B1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	90-131	292-326					
PGAG_HV1B5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	90-131	292-326					
PGAG_HV1BR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	90-131	292-326					
PGAG_HV1C4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	90-131	292-326					
PGAG_HV1EL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	90-131	292-326					
PGAG_HV1H2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	90-131	292-326					
PGAG_HV1J3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	87-131	292-326					
PGAG_HV1JR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	87-131	292-326					
PGAG_HV1MA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	90-137						
PGAG_HV1MN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	87-134	295-329					
PGAG_HV1N5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	90-131	292-326					
PGAG_HV1ND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	87-128	289-323					
PGAG_HV1OY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	90-131	292-326					
PGAG_HV1PV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	90-131	292-326					
PGAG_HV1RH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	90-131	292-326					
PGAG_HV1U4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	87-127						
PGAG_HV1W2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WAU2 ISOLATE)	292-326						
PGAG_HV1Z2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLA	87-132	293-327					
PGAG_HV2SB	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	292-326						
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	93-127	320-357					
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	67-103						
PGAG_IPMAE	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	89-133	118-172					
PGAG_JSRV	GAG POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	476-504						
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	83-131	136-190					
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	83-131	136-190					
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	222-260						
PGAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	37-94						
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A (SCV-L-A)	102-139	490-531					
PGAG_SFV1	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	128-177	378-416	583-634				
PGAG_SFV3L	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	373-407	435-532	591-632				
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	102-136						
PGAG_SIVAO	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	306-340						
PGAG_SIVJ	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/ CLONE GR	183-217	473-507					
PGAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	302-336						
PGAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	301-335						
PGAG_SIVDB	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	163-204	233-267	283-317				
PGAG_SIVDB	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	394-431						
PGAG_SMSAV	GAG POLYPROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	172-206	769-820					
PHEL1_HSV11	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	468-502	670-721					
PHEL1_HSV2H	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	158-203	413-449	599-633				
PHEL1_HSV3A	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	445-517	782-821					
PHEL1_VZVD	PROBABLE HELICASE	BOVINE CORONAVIRUS (STRAIN F15)	208-242						
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-242						
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-242						
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC).	208-242						
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN OC43)	208-242						
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN A/AICHI/2/68)	180-436						
PHEMA_IAAJC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	364-440						
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/71)	378-434						
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR								

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	378-454							
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	108-142	375-475	494-528					
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	360-452	487-532						
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/	360-452	487-532						
PHEMA_IACKS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	377-469	504-549						
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	112-146	377-469						
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	378-454							
PHEMA_IADA2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	377-476	495-547						
PHEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/78/76)	380-453							
PHEMA_IADA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	379-478	506-548						
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-454							
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-55	377-472						
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	364-440							
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	364-440							
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	364-440							
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	364-440							
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	364-440							
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/85)	364-440							
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	364-440							
PHEMA_IADIR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/83)	379-471	506-551						
PHEMA_IADM1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76	21-55							
PHEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	380-456							
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-55							
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-454							
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-55							
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	380-456							
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77	380-456							
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	377-477							
PHEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-454							
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-473							
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	377-476							
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	379-455							
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	112-146	360-484	503-537					
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/73)	112-146	360-484	503-537					
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C.DETROIT/1/64)	360-484	503-537						
PHEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	360-484	503-537						
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	379-455							
PHEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	379-455							
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	379-455							
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	112-146	360-484	503-537					
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	112-146	360-484	503-537					
PHEMA_IAHM3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63	379-455							
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	379-455							
PHEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	112-146	360-484	503-537					
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	112-146	360-484	503-537					
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	379-455							
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	379-455							
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	112-146	360-484	503-537					
PHEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1137/72)	112-146	360-484	503-537					
PHEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	379-455							
PHEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	379-455							
PHEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	379-455							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57	375-467	502-547						
PHEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	376-478	506-541						
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	376-478	506-548						
PHEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	377-453							
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	382-458							
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	380-456							
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	380-456							
PHEMA_IAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	380-456							
PHEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	364-440							
PHEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	108-142	375-475						
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	380-456							
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/MAINE/328/84)	378-477	496-534						
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	376-478	506-548						
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/	378-454							
PHEMA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/92)	378-454							
PHEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	379-474	506-552						
PHEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/5156/85)	112-146	377-469						
PHEMA_IATK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	379-471	506-551						
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	378-454							
PHEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	392-470	504-548						
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/8118/68)	378-454	493-540						
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	30-64	374-474						
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	373-472	487-539						
PHEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	21-55							
PHEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	387-456							
PHEMA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77	376-478	506-548						
PHEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	381-457							
PHEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	375-477	505-547						
PHEMA_IAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	380-456							
PHEMA_IAZH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	364-440							
PHEMA_IAZHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	364-440							
PHEMA_IAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	379-478	506-548						
PHEMA_IAZNJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	379-478	506-547						
PHEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKKEL/1/84	380-456							
PHEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87	388-473							
PHEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/43)	378-463							
PHEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	386-471							
PHEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	381-463							
PHEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	387-472							
PHEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	377-462							
PHEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	381-468							
PHEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	386-471							
PHEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	386-471							
PHEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	379-464							
PHEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/3/85)	381-466							
PHEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	388-473							
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	483-571							
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	471-559							
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	471-559							
PHEMA_INCHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	470-558							
PHEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	484-572							
PHEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	470-558							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	470-558							
PHEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NARA/82)	470-558							
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	471-559							
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	471-559							
PHEMA_INCP3	MEASLES VIRUS (STRAIN HALLE)	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	471-559							
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47	471-559							
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	471-559							
PHEMA_MEASE	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN EDMONSTON)	46-90							
PHEMA_MEASH	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN HALLE)	46-90							
PHEMA_MEASI	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN IP-J-CA)	46-87							
PHEMA_MEASY	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN YAMAGATA-1)	46-87							
PHEMA_MUMP1	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1	34-99							
PHEMA_MUMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	34-99							
PHEMA_MUMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	34-99							
PHEMA_MUMPS	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	34-99							
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	8-52	477-529						
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	1-49							
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	1-52							
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	1-52							
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	1-52							
PHEMA_NDVTG	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B./48)	1-49							
PHEMA_NDVU	HEMAGGLUTININ NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	1-52							
PHEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-73							
PHEMA_PI1HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	66-110							
PHEMA_PI2H	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS	247-281							
PHEMA_PI2HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	247-281							
PHEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	38-93							
PHEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	13-110	394-428						
PHEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/12454/74)	20-110	394-428						
PHEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	13-110	394-428						
PHEMA_PI3HU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	13-110	394-428						
PHEMA_PI3HV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/83)	13-110	394-428						
PHEMA_PI3HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	13-110	394-428						
PHEMA_PI3HX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/73)	13-110	394-428						
PHEMA_PI4HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	54-88							
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POXVIRUS	166-214	256-290						
PHEMA_RINDK	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KABETE O)	46-87							
PHEMA_RINDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	46-87	191-225						
PHEMA_SENDS	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	57-110							
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	57-110							
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	57-110							
PHEMA_SENDJ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	57-110							
PHEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	57-110							
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	18-52	387-421						
PHEMA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN WJ)	27-82							
PHEMA_SV5LN	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE HUMAN/LN)	27-82							
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	177-211							
PHEX1_ADE02	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	90-134							
PHEX1_ADE05	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	90-134							
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	85-134							
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-134							
PHEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7, AND HUMAN ADENOVIRUS TYPE	93-138							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
		VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN									
PHEX9_ADE12	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 12	88-137							
PHEX9_ADE41	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 41	67-126							
PHEX9_ADEC2	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	53-103							
PHEX9_ADENT	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	61-109							
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	341-386	433-467	583-624					
PHEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	330-379							
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352	408-449	553-587					
PHEX_ADE41	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 41	306-355	555-589						
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	301-346	385-419	544-578	705-739				
PHRG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	320-395	455-489						
P1226_ASFB7	LATE PROTEIN I226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	110-151							
PIBMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	3-44	378-419						
PIBMP_CAMVB	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BARI 1)	379-420							
PIBMP_CAMVC	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	3-37	378-419						
PIBMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	3-44	378-419						
PIBMP_CAMVE	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DDC)	3-37	378-419						
PIBMP_CAMVJ	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN S-JAPAN)	3-37	378-419						
PIBMP_CAMVN	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	3-37	378-419						
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	3-37	378-419						
PIBMP_CAMVS	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	3-37							
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	1-51	372-406						
PIBMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	1-48	132-179						
PIBMP_SOCMV	INCLUSION BODY MATRIX PROTEIN		53-98	290-324	498-532					
PIC18_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	331-365							
PIC18_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	331-365							
PIC18_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	324-362							
PIC18_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	466-500							
PIC18_HSVB2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	341-375							
PIC18_HSVEB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	58-99	361-395						
PIC18_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	60-112	290-340	647-691					
PIC18_MCMVS	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	299-333	303-337						
PIC18_PRVIF	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	190-224							
PICP0_HSVBJ	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN JURA)	190-224							
PICP0_HSVBK	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN K22)	1022-1056							
PICP4_HSVMG	TRANS-ACTING TRANSCRIPTIONAL ACTIVATOR PR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	920-954							
PICP4_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	207-241							
PIE63_HCMVA	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	241-275							
PIE63_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	282-316							
PIE63_HSVEB	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	195-229	258-306						
PIE63_VZVD	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	87-121							
PIE68_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	99-133							
PIE68_HSVEB	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	48-85							
PIE68_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	13-47							
PIR05_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-162							
PIR12_HCMVA	HYPOTHETICAL PROTEIN IRL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	280-314							
PKABL_FSVHY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 2)	217-251							
PKABL_MLVAB	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	ABELSON MURINE LEUKEMIA VIRUS	172-227	263-304						
PKAKT_MLVAT	AKT KINASE TRANSFORMING PROTEIN	AKT8 MURINE LEUKEMIA VIRUS	23-64	104-178						
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	218-252							
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	313-362	638-679	812-849					
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	65-99							
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRCII)								

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
CLENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PKFPS_FUJSV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	65-99	152-251	348-398					
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	47-81							
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1	38-82							
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	228-262	431-472						
PKITH_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	90-124							
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	90-124							
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	90-124							
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	90-124							
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	90-124							
PKITH_HSV23	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	91-125							
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 2 (STRAIN WC11)	616-665							
PKITH_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	19-53	178-219						
PKITH_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	19-53	178-230						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	180-214							
PKITH_HSVMR	THYMIDINE KINASE	MARMOSET HERPESVIRUS	52-86							
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	337-389							
PKITH_PRVNJ	THYMIDINE KINASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	161-202							
PKMIL_AVIMH	MIL SERINE/THREONINE-PROTEIN KINASE TRANSF	AVIAN RETROVIRUS MH2	69-103							
PKR15_HSV11	GENE 15 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	190-224							
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	57-91	281-315						
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	487-528	597-631						
PKRAF_MSV36	RAF SERINE/THREONINE-PROTEIN KINASE TRANSF	MURINE SARCOMA VIRUS 3611	11-45							
PKRB1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	127-168							
PKRB1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	127-168							
PKRB1_VARV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	123-171							
PKRB2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-181							
PKRB2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-181							
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	169-203							
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	136-170							
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	169-203							
PKROS_AVISU	ROS TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	111-145							
PKRYK_AVIRJ	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN RETROVIRUS RPL30	15-66							
PKTHY_VACCV	THYMIDYLATE KINASE	VACCINIA VIRUS (STRAIN WR), (STRAIN COPENHAGEN)	135-169							
PKYES_AVISY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN Y73)	174-233							
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	441-475							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	223-264							
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-232	408-442						
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	199-233							
PL52_ADE02	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	238-284	301-349						
PL52_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	238-284	301-349						
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	144-179	294-338						
PMCEL_SFVKA	MRNA CAPPING ENZYME	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-152	622-656						
PMCEL_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41	623-657						
PMCEL_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	1-41	623-657						
PMCEL_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	1-39	623-657						
PMCES_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-137	245-286						
PMCES_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	72-137	245-286						
PMCES_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	72-137	245-286						
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	116-157	279-313	738-772					
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	26-66							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	29-66							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PMOVP_TMVTO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	32-66							
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L11A)	32-80							
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L11)	32-80							
PMTC1_CHVN1	MODIFICATION METHYLASE CVIBI	CHLORELLA VIRUS NC-1A	222-256							
PMTC2_CHVP1	MODIFICATION METHYLASE CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	116-164							
PMYC_AVIM2	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	329-366	375-419						
PMYC_AVIMC	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	230-267	376-420						
PMYC_AVIMD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MDI	230-267	376-420						
PMYC_AVIME	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	377-421							
PMYC_AVIOK	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	224-261	370-414						
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-437							
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-437							
PNCA2_CVMA5	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	12-46							
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	177-211							
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	46-83	122-156						
PNCAP_BRSVA	NUCLEOCAPSID PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	62-108	163-200	248-303	343-383				
PNCAP_BUNGE	NUCLEOCAPSID PROTEIN	BUNYAVIRUS GERMISTON	176-228							
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	176-229							
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	176-229							
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	175-228							
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C680)	223-306	427-461						
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	137-174	179-217	354-402					
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653514)	40-84	321-369						
PNCAP_CVBF	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN F15)	349-383							
PNCAP_CVBM	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	349-383							
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	165-227							
PNCAP_CVHOC	NUCLEOCAPSID PROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	349-383							
PNCAP_CVMJH	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	12-46							
PNCAP_CVPFS	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	149-206							
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	165-227							
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRIT	149-228							
PNCAP_CVPRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	149-228							
PNCAP_CVRSD	NUCLEOCAPSID PROTEIN	RAT CORONAVIRUS (STRAIN 681)	12-46							
PNCAP_CVTKE	NUCLEOCAPSID PROTEIN	TURKEY ENTERIC CORONAVIRUS	349-383							
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	230-306							
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	151-206							
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	1-35	40-74	333-381					
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE AC280)	233-297							
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	62-145	163-200	248-303	343-380				
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	62-145	163-200	248-303	343-380				
PNCAP_IBVG	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN GRAY)	186-227							
PNCAP_IBVK	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	186-220							
PNCAP_JUNIN	NUCLEOCAPSID PROTEIN	JUNIN ARENAVIRUS	96-151							
PNCAP_LASSG	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	65-113	126-174						
PNCAP_LASSI	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	65-113	122-174	467-504					
PNCAP_LDV	NUCLEOCAPSID PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS(	3-40							
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	45-117	460-497						
PNCAP_LYCVW	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	45-79	83-117	460-497					
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	175-228							
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	188-226	363-411						
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	188-226	363-411						
PNCAP_MEASI	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN IP-J-CA)	188-226	363-411						

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	188-226	363-411						
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	65-106	471-505						
PNCAP_MUMP1	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	214-255	500-534						
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-255							
PNCAP_PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	1-35	40-74	337-392					
PNCAP_PI1HC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	212-272	441-510						
PNCAP_PI1HW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	212-272	441-510						
PNCAP_PI2HT	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	214-266	344-378						
PNCAP_PI3B	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	200-403	448-490						
PNCAP_PI3H4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	87-135	208-266	344-403	440-491				
PNCAP_PI4HA	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	58-94	191-267						
PNCAP_PI4HB	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	58-94	191-267						
PNCAP_PIARV	NUCLEOCAPSID PROTEIN	PICHINDE ARENAVIRUS	69-112							
PNCAP_PIRYV	NUCLEOCAPSID PROTEIN	PIRY VIRUS	71-116	325-359						
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	1-35	40-75	337-392					
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	1-35	40-75	337-385					
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-141	248-303	344-388					
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-167							
PNCAP_SEND5	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	212-272	345-404						
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	212-272	345-404						
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	212-272	345-408						
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	1-35	40-74	333-381					
PNCAP_SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	215-267	372-406	418-466					
PNCAP_SYNV	NUCLEOCAPSID PROTEIN	SONCHUS YELLOW NET VIRUS	332-366							
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	50-84	230-264						
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	215-249							
PNCAP_TSWVB	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIH/BR	79-120							
PNCAP_TSWVH	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (HAWAIIAN ISOLATE)	79-120							
PNCAP_TSWVL	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L1)	79-120							
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	51-102							
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	249-325							
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARKAI)	142-180	249-325						
PNCAP_VSVIG	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	42-108							
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	67-115							
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	42-115							
PNEF_HV2BE	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	7-48							
PNEF_HV2D1	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	7-41							
PNEF_HV2RO	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	112-163							
PNEF_HV2SB	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	109-150							
PNEF_HV2ST	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	108-149							
PNEF_SIVAI	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	96-140							
PNEF_SIVS4	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)	9-43	233-267						
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/7	47-81							
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	33-74							
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	50-91							
PNRAM_IACKQ	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/	349-383							
PNRAM_IACKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/8125/	349-383							
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	14-48							
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	14-48	194-229						
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74	10-47	193-227						
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	361-402						
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	50-91							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	50-91							
PNRAM_IAPEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PEKING/2/68(H3N2))	50-88							
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	49-91							
PNRAM_IASHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	10-44							
PNRAM_IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	7-41							
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	49-83							
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-91							
PNRAM_IAWAM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/ANTARCTIC/1/74)	49-91							
PNRAM_IAWRM	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	5-46	148-382						
PNRAM_INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	5-46	149-383						
PNRAM_INBIK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	5-46	149-383						
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86),(STRAIN B/A	5-39	148-382						
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN A/USSR/90/77)	5-39	149-383						
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	5-46	148-382						
PNRAM_INBMF	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/NETHERLANDS/18/81)	5-46	149-383						
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	5-39	149-383						
PNRAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	5-39	149-383						
PNRAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	5-39	148-382						
PNRAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	5-39							
PNS1_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	790-828							
PNS5_INSVN	NON-STRUCTURAL PROTEIN	IMPATIENS NECROTIC SPOT VIRUS (STRAIN NL-07)	95-139	204-238						
PNS5_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR	3-37							
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L)	3-37							
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69	110-144						
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-169	413-449	514-555					
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	56-90	248-289	540-599					
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	56-90	248-289	540-599					
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS (STRAIN WR)	154-193	413-503						
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	189-223	689-735						
PP10B_HSVXU	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 0 / STRAIN UGANDA-1102)	121-180							
PPA1_VACCC	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-180							
PPA1_VACCV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	121-180							
PPA1_VARV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VARIOLA VIRUS	122-146							
PPAP2_CAPVK	POLY(A) POLYMERASE REGULATORY SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	95-114							
PPAP2_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	201-249							
PPAP2_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	201-249							
PPAP2_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	201-249							
PPAP2_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	11-36	60-103						
PPEI3_NPVAC	12.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	11-98							
PPEI2_NPVOP	11.5 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	19-77	197-249						
PPEI3_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	190-240							
PPEI3_NPVOP	MAJOR IMMEDIATE EARLY PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	6-42	48-89	97-131					
PPEI4_NPVAC	48.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	42-82	105-199						
PPEI4_NPVOP	47.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	414-448							
PPIV2_ADE07	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	37-71							
PPIV2_ADE02	PROTEIN VI PRECURSOR	HUMAN ADENOVIRUS TYPE 2	37-71							
PPIV6_ADE05	PROTEIN VI PRECURSOR	HUMAN ADENOVIRUS TYPE 5	37-71							
PPOL1_BAYMO	GENOME POLYPROTEIN I	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	329-361	741-777	953-991	1285-1299	2229-2266	2109-2153	2368-2404	
PPOL1_BAYMO	GENOME POLYPROTEIN I	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	329-363	671-705	743-777	933-994	1265-1299	2227-2264	2307-2350	2366-2402
PPOL1_BAYMU	GENOME POLYPROTEIN I	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	128-161	165-216	230-273	377-415				
PPOL1_GCMV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	170-213	486-519	636-677	691-735	1157-1196	1378-1412	1906-1941	
PPOL1_GFLV	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	223-270	929-977						
PPOL1_TBRV3	RNA1 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	161-206							
PPOL1_TRSVR	RNA1 POLYPROTEIN	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	669-733	739-773	787-838				
PPOL2_BAYMO	GENOME POLYPROTEIN 2									

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL2_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	669-732	739-773	787-828					
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	365-406	542-602						
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	4-38							
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	158-206	334-368						
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	849-886	1008-1064	1382-1416	1459-1507	1576-1617			
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHŒA VIRUS (ISOLATE NADL)	244-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1869-1910	2226-2260
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHŒA VIRUS (STRAIN SD-1)	245-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1779-1820	2136-2170
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-130							
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	9-43	562-596	664-698	1045-1100	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	15-49	1040-1086	1895-1940					
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	15-49	1021-1067	1876-1921					
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	15-49	1024-1070	1879-1924					
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	15-49	642-681	1022-1068	1877-1922				
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	15-49	1024-1070	1879-1924					
PPOLG_CYVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	120-154							
PPOLG_DEN1B	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN 836-1)	74-108							
PPOLG_DEN1A	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN AHF 82-80)	74-108							
PPOLG_DEN1C	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN CV1636/77)	74-108							
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	74-108	832-873	960-994	1142-1179	1386-1420	1614-1648	2518-2554	2946-3016
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	74-108	833-874	961-995	1143-1180				
PPOLG_DEN2I	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	448-492							
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M2)	448-495							
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2485-2551
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	728-777							
PPOLG_DEN2H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TH-36)	497-546							
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	213-247	398-432						
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	74-108	728-777	832-875	961-995	1146-1180	1246-1280	1418-1452	1615-1649
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	448-497	552-595	681-715	866-900	966-1000	1205-1239		
PPOLG_DEN2U	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PUO-218)	614-663							
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	830-872	959-993	1385-1419	2224-2258	2480-2521	2704-2738	2940-2978	2980-3014
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	957-993	1380-1414	2514-2555	2701-2735	2941-2975	2977-3011		
PPOLG_EC11G	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	213-259	1079-1113						
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1074-1115	1472-1518	1522-1570	1665-1706	1789-1823			
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETO	145-179	1076-1117	1474-1520	1524-1572	1667-1708			
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGEN	145-179	1076-1117	1474-1520	1524-1572	1667-1708			
PPOLG_ENMG3	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	145-179							
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	78-112							
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	221-255	294-328	578-612	1103-1153	1493-1528	2165-2200		
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	220-254	293-327	577-611	1103-1164	1493-1528	2164-2199		
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	221-255	1103-1153	1493-1528	2164-2199				
PPOLG_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU [C-S	87-128	693-728						
PPOLG_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	221-255	283-317	577-611					
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	364-398							
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	440-493	626-660	695-729	1033-1070	1190-1235	1307-1343	1779-1820	2136-2170
			2466-2500	2525-2559	2667-2708	3057-3098	3152-3193	3406-3440		
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	440-493	626-660	695-729	1033-1070	1173-1235	1779-1820	2136-2170	2388-2436
PPOLG_HCVBK			2466-2500	2525-2559	2667-2708	3057-3098	3152-3195	3406-3440	3521-3562	
PPOLG_HCVE0	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	357-398	2328-2365						
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC10)	63-99							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLG_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	364-398							
PPOLG_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	364-398							
PPOLG_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	236-270							
PPOLG_HCVHK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	248-282							
PPOLG_HCVJ2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-KF)	357-398							
PPOLG_HCVJ5	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J2)	357-398							
PPOLG_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	364-398							
PPOLG_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	364-401	1716-1750	2082-2116					
PPOLG_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	364-398							
PPOLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	364-398	1716-1750	2082-2116	2468-2502	2538-2572			
PPOLG_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	357-405	2331-2365						
PPOLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	357-391	2331-2365						
PPOLG_HPAV2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	357-398	2328-2365	2444-2503					
PPOLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLG_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLG_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLG_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	2-43	101-135	203-237					
PPOLG_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	80-114	182-216						
PPOLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	2-43	101-135	203-237	870-904	1021-1055	1103-1151		
PPOLG_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	2-43	101-135	203-237	870-904	1021-1055	1103-1151		
PPOLG_HPAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	2-43	101-135	203-237	870-904	1021-1055	1103-1158		
PPOLG_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	6-47	105-139	207-241	849-908	1025-1059	1115-1155	1158-1198	
PPOLG_HRV14	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	2-43	101-135	203-237					
PPOLG_HRV1A	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1020-1054	1393-1427	1479-1513	1877-1920				
PPOLG_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	362-396							
PPOLG_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	387-421	863-904	1133-1168					
PPOLG_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	856-897	1126-1169	1552-1593					
PPOLG_HUEV7	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1566-1607							
PPOLG_IBDVO	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	359-397	876-917	1032-1088	1403-1441	1896-1934			
PPOLG_JAEVI	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	134-168	250-291	475-524					
PPOLG_JAEVS	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	74-128	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_KUNJM	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	7-48	138-183	467-504	908-942	1337-1378			
PPOLG_LANVT	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	74-108	207-251	851-885	2464-2498	2528-2579	2740-2778	3325-3359	3389-3423
PPOLG_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	68-102	431-465	962-996	1431-1472	1932-1966	2536-2591	2967-3001	3003-3037
			3102-3145							
PPOLG_LIV	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	68-102	431-465						
PPOLG_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	68-123	231-272	431-465					
PPOLG_MCFA	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 526)	151-185							
PPOLG_MVEV	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	80-114	908-942	2049-2087	2630-2689	3036-3095	3290-3341		
PPOLG_OMV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	67-115	209-253	853-887	979-1013	1408-1449			
PPOLG_PEMVC	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	481-515	946-984	1072-1106					
PPOLG_POL1M	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	55-100	207-248	377-411	704-738	827-862	877-947	1021-1055	1167-1201
			1488-1529	1787-1821	1948-1982	2202-2236	2258-2310	2805-2839	3003-3037	
PPOLG_POL1S	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1046-1101	1414-1448	1500-1548	1806-1840	1902-1947		
PPOLG_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	9-43	899-933	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949
PPOLG_POL2W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	9-43	897-931	1045-1100	1413-1447	1502-1547	1608-1649	1806-1840	1902-1947

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLG_POL32	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	9-43	897-831	1045-1100	1413-1447	1502-1547	1608-1649	1806-1840	1902-1947
PPOLG_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23127)	9-43	896-930	1044-1098	1412-1446	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_PPVD	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P3/LEON/37 AND P3/LEON 12A[1]B)	9-43	896-930	1044-1099	1412-1446	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	164-208	441-503	728-769	815-867	921-955	1741-1782		
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	116-157	784-818	1146-1197					
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	164-208	403-437	440-502	727-768	814-873	920-954	1740-1781	
PPOLG_PRSVH	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	164-208	403-437	440-502	727-768	814-866	920-954	1740-1781	
PPOLG_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA)	68-102	434-468						
PPOLG_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA 5-1)	325-359							
PPOLG_PSBMV	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	325-359							
PPOLG_PVYC	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC [redacted] (STRAIN DPD1)	253-315	355-389	529-589	935-976	984-1018	1080-1177	1588-1627	1808-1860
			1971-2015	2379-2413	2712-2746	2870-2907				
PPOLG_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	131-196	701-735	802-856					
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	144-181	701-735	802-863	901-949	1401-1441	1492-1526	1728-1772	1777-1818
			2272-2306							
PPOLG_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	140-196	211-245	701-735	802-863	1401-1441	1492-1526	1728-1772	1777-1818
			1929-1970							
PPOLG_PWVSE	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	140-196	211-245	701-735	802-856				
PPOLG_PWVTB	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN SEVERE)	203-237							
PPOLG_PYFVI	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN TIP BRIGHT)	203-237							
PPOLG_STEVM	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	194-228	1111-1172	1379-1413	1858-1899	1950-1991	2703-2737		
PPOLG_SVDVH	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	106-143	673-707	739-773	975-1009	1404-1438			
PPOLG_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN H/J '76)	15-49	1024-1070	1779-1813	1890-1924				
PPOLG_TBEVS	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG/27/72)	15-49	1024-1070	1890-1924					
PPOLG_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	68-140	231-272	431-465	1158-1192	1431-1472	1929-1966	2182-2216	2535-2590
			2965-2999	3051-3092	3100-3143					
PPOLG_TEV	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	68-140	231-272	431-465	1158-1192	1431-1492	1932-1966	2536-2591	2967-3001
			3003-3037	3053-3094	3102-3145					
PPOLG_TMEVB	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (S	TOBACCO ETCH VIRUS	73-124	166-222	540-584	720-782	828-925	1148-1192	1416-1460	1494-1535
			1668-1702	1747-1781	1792-1826	2395-2434	2787-2821			
PPOLG_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN	1306-1340	1483-1518	1601-1635					
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1304-1338	1481-1516	1599-1663					
PPOLG_TUMV	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1306-1340	1483-1518	1601-1635					
PPOLG_TVMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	216-259	314-362	494-528	768-839	1443-1477			
PPOLG_WMV2	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	34-68	408-449	667-704	761-813	851-885	969-1017	1031-1072	1643-1677
			1686-1725	2316-2374	2701-2749	2814-2848				
PPOLG_WNV	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	68-105	202-236						
PPOLG_YEFVI	GENOME POLYPROTEIN	WEST NILE VIRUS	74-108	207-251	847-881	973-1007	1413-1447	2461-2495	2525-2576	2737-2775
			3320-3357	3385-3426						
PPOLG_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2958-2996	3097-3143
PPOLG_YEFV8	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2958-2996	3097-3143
PPOLH_POL1M	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899/81)	75-116	418-452	525-563	728-768				
PPOLN_EEVVT	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949	
PPOLN_FCVC6	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	345-382	898-932	1945-1979					
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	510-544							
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	4-43	369-410	986-1020	1023-1061				
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	338-379	1139-1177						
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	338-379							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	338-379	1139-1184						
PPOLN_MIDDV	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	337-378	1138-1176						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	922-977							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLN_RHDV	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	899-933	1942-1986	2444-2502					
PPOLN_RRVN	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	188-234	306-347	409-457	1657-1716				
PPOLN_RRVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	895-929	1928-1962	2414-2467					
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	597-631	1083-1136						
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	1506-1540	1551-1585	1730-1767	1862-1896				
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1094-1128	2358-2392						
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	919-971	1491-1525	1961-1996	2444-2478				
PPOLR_EPMV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1491-1525	1959-1994	2442-2476					
PPOLS_EEEV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	899-933	1127-1161						
PPOLS_EEEVJ	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	372-406	914-951						
PPOLS_EEEVS	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA33(TEN BRO	373-407	915-952						
PPOLS_EEVVE	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1216-1250							
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	1216-1250							
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	134-168	231-286	470-523					
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	134-168	231-286	470-523					
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	134-168	231-286	470-523					
PPOLS_IBDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	134-168	231-286	304-340					
PPOLS_IBDVP	NONSTRUCTURAL PROTEIN VP4	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	115-149	212-267	451-504					
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	134-168	249-283	470-523					
PPOLS_IPNVJ	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	69-103	723-785						
PPOLS_IPNVN	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	716-786							
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	1204-1238							
PPOLS_RRV2	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN 213970)	35-69							
PPOLS_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	369-403	939-973						
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973							
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	999-1036							
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	999-1036							
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	999-1036							
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	362-396							
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	362-396							
PPOLS_SINDW	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (WILD TYPE SB DERIVED FROM STRAIN AR339)	34-68							
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	913-947							
PPOL_BAEVM	STRUCTURAL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	42-80	676-743	794-832	1001-1042				
PPOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	625-673							
PPOL_BLVJ	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	625-673							
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	879-934							
PPOL_CAMVD	POL POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	177-211							
PPOL_COYMV	ENZYMATIC POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	87-121	333-367	447-498	838-876	896-930	1310-1351		
PPOL_EIAV9	PUTATIVE POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	513-566	1022-1056						
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	513-566	1022-1056						
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	512-565	1021-1055						
PPOL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	533-600	623-659	858-899					
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	429-473	606-663						
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	428-473	606-642						
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	428-472	595-662						
PPOL_FMVD	POL POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-437							
PPOL_FOAMV	ENZYMATIC POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	140-174	217-256	285-326					
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	528-562	673-740						
PPOL_HTL1A	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	670-711							
PPOL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE	670-711							
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	501-537	606-664						
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	513-549	639-676						
PPOL_HV1B5	POL POLYPROTEIN									

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	513-549	618-676						
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	513-549	618-676						
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	500-536	626-663						
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	501-537	606-664						
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	505-541	610-668						
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	476-536	601-663						
PPOL_HV1N5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	504-540	609-667						
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	501-537	627-664						
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	500-536	626-663						
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	501-537	606-664						
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	513-549	693-676						
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	500-536	605-663						
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	500-536	601-663						
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	500-536	626-663						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	49-83	484-582	653-687	817-851				
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	356-390	464-562	632-666					
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	502-600	671-705						
PPOL_HV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	376-410	484-526	529-577	653-687				
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	464-562	633-667						
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	44-78	356-390	464-529	633-667				
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	357-391	465-563	634-668					
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	46-80	473-562	633-667					
PPOL_IPHA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	484-518	522-577	653-687					
PPOL_JSRV	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	462-503							
PPOL_MLVAK	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	190-231							
PPOL_MLVAV	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	325-392							
PPOL_MLVFS	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	677-744							
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	682-749							
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	682-749							
PPOL_MLVMO	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	682-749							
PPOL_MLVRD	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	677-744							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	677-744							
PPOL_MPMV	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	62-129							
PPOL_OMVVS	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	470-504	578-613						
PPOL_RSVP	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	470-505	855-910						
PPOL_RTBV	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	646-684							
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-96	101-135	176-236	325-362	433-474	1005-1039	1405-1439
PPOL_SFVI	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-96	101-135	176-236	325-362	433-474	1005-1039	1405-1439
PPOL_SFV3L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	349-383	427-464	494-535					
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	124-165	429-467	496-530					
PPOL_SIVA2	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	351-385	637-678	737-771	938-979				
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-86							
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	477-516	642-683	742-783					
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	175-209	476-515	641-700	942-983	1020-1054			
PPOL_SIVCZ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-698	757-798						
PPOL_SIVGB	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	527-561	626-688						
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	9-57	446-483	629-673	793-827	912-946			
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	485-519	654-688						
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	485-519	654-688						
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)	448-482	617-651						
PPOL_SOCMV	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	451-485	620-654						
PPOL_SRVI	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	247-295	372-416						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_VILV	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	470-504	578-613						
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	489-524	874-929						
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	489-524	874-929						
PPP15_HCMVA	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	489-524	874-929						
PPR7J_MMTVB	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-150	187-221						
PPR7J_MMTVC	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	152-200							
PPR7J_MMTVG	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	20-79							
PPR7L_MMTVG	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	61-95	142-201						
PPR7R_MMTVG	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	145-204	270-311						
PPYHD_CPVBM	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	141-200	266-307						
PPYHD_NPVAC	POLYHEDRIN PRECURSOR	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	13-85							
PPYHD_NPVAS	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVBM	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVBS	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-54							
PPYHD_NPVLD	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVMB	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS V	14-48							
PPYHD_NPVOP	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVPF	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHED	14-48							
PPYHD_NPVSE	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS	14-48							
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN	14-48							
PPYHD_NPVSL	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PRASK_MSVKI	POLYHEDRIN	SPODOPTERA LITTORALIS NUCLEAR POLYHEDROSIS VIRUS	17-51							
PREV_BIV27	TRANSFORMING PROTEIN 21	KIRSTEN MURINE SARCOMA VIRUS	142-176							
PREV_EIAV9	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	77-115							
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	51-89							
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	51-89							
PREV_HV112	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	81-119							
PREV_HV1A2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CLONE 12)	35-69							
PREV_HV1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	32-69							
PREV_HV1B8	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	35-69							
PREV_HV1BN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	25-59							
PREV_HV1BR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-59							
PREV_HV1EL	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	35-69							
PREV_HV1H2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	32-66							
PREV_HV1J3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	35-69							
PREV_HV1JR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	29-63							
PREV_HV1MA	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	31-66							
PREV_HV1MN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	31-66							
PREV_HV1OY	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	31-66							
PREV_HV1PV	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OY1 ISOLATE)	32-69							
PREV_HV1S3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) AN	35-69							
PREV_HV1SC	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	35-69							
PREV_SIVA1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	32-69							
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	26-77							
PREV_SIVAI	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	26-77							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	29-77							
PREV_SIVCZ	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	28-75							
PREV_VILV	REV PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	33-67							
PRIR1_ASFM2	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	21-62							
PRIR1_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	7-41	88-133	635-683					
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	213-247	689-723						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-668							
PRIR1_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	76-110							
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HERPESVIRUS SAIMIRI (STRAIN 11)	324-365							
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-402							
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN WR)	367-402							
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARIOLA VIRUS	367-402							
PRIR2_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	223-257							
PRIR2_HSVB3	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EPSTEIN-BARR VIRUS (STRAIN B95-8)	89-137							
PRIR2_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	101-135							
PRIR2_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	106-140							
PRIR2_SFVKA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	HERPESVIRUS SAIMIRI (STRAIN 11)	125-159							
PRIR2_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-132							
PRIR2_VACCP	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN COPENHAGEN)	98-132							
PRIR2_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN L-IVP)	98-132							
PRIR2_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN WR)	98-132							
PRL1_HSV2H	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VARIOLA VIRUS	98-132							
PRP94_VACCV	NEUROVIRULENCE FACTOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	171-212							
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN	116-150	465-540	757-791					
PRPO1_VACCC	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VARIOLA VIRUS	41-75	116-150	465-540	757-791				
PRPO1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	243-291	622-656	754-791	954-988	1006-1057			
PRPO1_VARV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	243-291	622-656	754-791	954-988	1024-1058			
PRPO2_CAPVK	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	243-291	622-656	754-791	954-988	1006-1057			
PRPO2_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	CAPRIPOXVIRUS (STRAIN KS-1)	19-60	114-155	589-630					
PRPO2_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	COWPOX VIRUS	211-245	359-400	833-874					
PRPO2_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	211-245	359-400	833-874					
PRPO4_VACCC	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VARIOLA VIRUS	211-245	359-400	833-874					
PRPO4_VACCV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-116							
PRPO4_VARV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	62-116							
PRPO5_VACCC	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VARIOLA VIRUS	62-116							
PRPO5_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-71							
PRPO5_VARV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	1-71							
PRPO6_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VARIOLA VIRUS	1-71							
PRPO6_VARV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	25-59							
PRPO7_VACCV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VARIOLA VIRUS	25-59							
PRPO7_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	43-93							
PRPOA_LELV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VARIOLA VIRUS	43-93							
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1567	1721-1758	1958-1992	2109-2157				
PRRP1_IAANN	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	1083-1117	1477-1518	1633-1673					
PRRP1_IABEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-242	279-313						
PRRP1_IADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BEIJING/11/56)	171-242	279-313	350-391					
PRRP1_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/DUNEDIN/4/73)	171-242	279-313						
PRRP1_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	171-242	279-313						
PRRP1_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	168-242	279-313						
PRRP1_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	168-242	279-313						
PRRP1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	171-242	279-313						
PRRP1_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	171-242	279-313						
PRRP1_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-242	279-313						
PRRP1_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	171-242	279-313						
PRRP1_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	171-242	279-313						
PRRP1_IAME3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	171-242	279-313						
PRRP1_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/88)	171-242	279-313						
PRRP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	171-242	279-313						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
			AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS								
PRRP1_IASN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	168-242	279-313						
PRRP1_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	171-242	279-313						
PRRP1_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	171-242	279-313						
PRRP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	171-242	279-313						
PRRP1_IAWIS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	168-242	279-313						
PRRP1_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	168-242	279-313						
PRRP1_IAZON	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	187-242	279-313						
PRRP1_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	171-242	279-313						
PRRP1_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	171-242	279-313						
PRRP1_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66)	208-249							
PRRP1_INBLE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE]	208-249							
PRRP1_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	208-249							
PRRP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	350-384	648-686	707-752					
PRRP2_IADH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	110-144	177-218						
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	110-144	177-218						
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	110-144	177-218						
PRRP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	110-144	177-218						
PRRP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	110-144	177-218						
PRRP2_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	110-144	177-218						
PRRP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	110-144	177-218						
PRRP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	110-144	177-218						
PRRP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	110-144	177-218						
PRRP2_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	110-144	177-218						
PRRP2_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	110-144	177-218						
PRRP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	110-144	177-218						
PRRP2_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	110-144	177-218						
PRRP2_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERS	110-144	177-218						
PRRP1_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	110-144	177-218						
PRRP2_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	110-144	177-218						
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	110-144	177-218						
PRRP2_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	110-144	177-218						
PRRP2_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78	110-144	177-218						
PRRP2_IAZI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	110-144	177-218						
PRRP2_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	110-144	177-218						
PRRP2_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	110-144	177-218						
PRRP2_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	111-196	349-390						
PRRP2_INBSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	111-196	349-390						
PRRP3_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	111-196	349-383						
PRRP3_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	363-402	473-514	707-755				
PRRP3_IACH1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	363-402	473-514	518-567	707-755			
PRRP3_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	1-42	363-402	473-514	707-755				
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	363-402	473-514	707-755				
PRRP3_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	1-42	363-402	473-514	707-755				
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77	1-42	363-402	473-514	707-755				
PRRP3_IAHK6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	7-41	363-402	473-514	707-755				
PRRP3_IAILO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/1860)	1-42	363-402	473-514	707-755				
PRRP3_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	363-402	473-514	707-755				
PRRP3_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	1-42	363-402	473-514	721-755				
PRRP3_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	363-402	473-514	707-755				
PRRP3_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	1-42	363-402	473-514	707-755				
PRRP3_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	1-42	363-402	473-514	707-755				
PRRP3_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	1-42	363-402	473-514	707-755				

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRP3_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	1-42	363-402	473-514	707-755				
PRRP3_IAME8	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	363-402	473-514	707-755					
PRRP3_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/8/88)	7-41	363-402	473-514	707-755				
PRRP3_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	363-402	473-514	707-755				
PRRP3_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	363-402	473-514	707-755				
PRRP3_IASE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	1-42	363-402	473-514	707-755				
PRRP3_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/82)	1-42	363-402	473-514	707-755				
PRRP3_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	363-402	473-514	707-755				
PRRP3_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	1-42	363-402	473-514	707-755				
PRRP3_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	1-42	363-402	473-514	707-755				
PRRP3_IAZ11	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33	1-42	363-402	473-514	707-755				
PRRP3_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	363-402	473-514	707-755				
PRRP3_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77	7-41	363-402	473-514	707-755				
PRRP3_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	458-533							
PRRP3_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	458-533							
PRRP3_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	235-269	275-309						
PRRP3_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	235-269	275-316						
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	THOGOTO VIRUS	343-401							
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	358-392	495-571	1742-1776	1971-2008	3664-3724	3912-3946		
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	617-651	1364-1398	2769-2803	3586-3620	3821-3855	4075-4121	4319-4353	
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	20-64	617-651	943-1009					
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	1129-1170	1303-1337	1453-1494	1692-1726	2629-2670			
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	1129-1170	1303-1337	1453-1494	1690-1724	2627-2668			
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	499-550	650-695	1460-1494	1509-1548	2246-2287			
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	115-156							
PRRPL_BUNYW	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	308-342	705-748	825-903	1021-1076	1114-1201			
PRRPL_CDVO	RNA POLYMERASE	BUNYAMWERA VIRUS	2-36	80-114	308-363	371-412	1704-1741	1802-1861	1889-1935	
PRRPL_HANTV	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	20-54							
PRRPL_HRSVA	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	98-139	174-208	372-431	557-591	655-696	731-783	905-949	1276-1310
			1419-1453	1742-1776	1993-2027					
PRRPL_MABVM	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	87-188	827-861	1131-1179	1185-1220	1465-1517			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	597-631	1046-1092	1490-1552	1804-1838	2029-2063	2194-2266		
PRRPL_MEASE	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	597-631	1046-1092	1490-1552					
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	197-231	790-824	869-903	1064-1109	1283-1317	2121-2155		
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	164-214	220-254	267-304	576-627	752-807	1231-1286	1447-1481	1487-1531
			1566-1600	2191-2225						
PRRPL_PI2HT	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	167-208	230-295	1969-2013	2043-2077	2108-2142			
PRRPL_PI3H4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIDA)	136-170	575-628	750-785	1226-1284	1316-1357	1417-1479	1564-1630	1687-1721
			1901-1955							
PRRPL_PUUMH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	48-91	107-163	540-574	747-781	1064-1129	1293-1356	1499-1536	1994-2036
PRRPL_RABVP	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	98-132	381-415	444-488	557-591	655-696	731-783	922-976	1119-1153
			1742-1776	1940-1975	1993-2032					
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	73-114	197-231	696-730	1174-1222	1522-1580	1584-1618	2068-2123	
PRRPL_RDV	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	73-114	197-231	696-730	749-783	1174-1222	1522-1580	1584-2123	
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	17-61	534-575	844-878	918-985	1037-1071			
PRRPL_SEND5	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	398-439	641-678	832-887	1081-1115	1653-1687	1819-1870		
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2146-2216							
PRRPL_SEND2	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	129-163	360-420	432-476	567-601	884-939	1059-1100	1319-1356	1820-1854
			1966-2036							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
TILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPL_SEOUS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2146-2216							
PRRPL_SVSWR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	98-139	174-208	557-591	655-696	731-765	1742-1776	1947-1981	1993-2027
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	547-627	747-781	1225-1280	1319-1353	1592-1626	1676-1715	2024-2058	
PRRPL_TSWVB	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	760-794	825-859	977-1014	1089-1137	1978-2032	2059-2107		
PRRPL_UUK	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNHI/BR	46-101	399-433	539-573	589-634	1119-1153	1195-1236	1321-1379	1538-1572
			1684-1725	1857-1898	2073-2127	2156-2200	2206-2247	2315-2368	2378-2419	2809-2843
PRRPL_VSVJH	RNA POLYMERASE	UUKUNIEMI VIRUS	127-183	282-323	836-874	1030-1071	1481-1515	2015-2049	2061-2098	
PRRPL_VSVJO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-715	720-763	1522-1567	1802-1836			
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-715	720-763	1802-1836				
PRRPO_ACLSV	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	674-715	720-763	1019-1074	1742-1799	2066-2107			
PRRPO_BWYVF	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	228-262	557-596	916-950	1235-1269				
PRRPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	304-341							
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	234-285							
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	234-285							
PRRPO_CARMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	234-285							
PRRPO_CGMVS	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS	93-131							
PRRPO_IBDVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STR	7-41	387-428	446-480	726-767	1445-1479			
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	384-432	446-484						
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	144-185	266-307	709-757	771-809				
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	147-181	268-407	501-535	750-802				
PRRPO_LYCVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	147-181	366-407	501-535	753-802				
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	301-346	805-886	926-960	1509-1543	2090-2124			
PRRPO_MCMV	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	301-345							
PRRPO_PEAMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	181-215	697-731						
PRRPO_PLRVI	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	321-358							
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1)	336-373	423-457						
PRRPO_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	336-373	423-457						
PRRPO_RCNMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN	321-362	402-454	627-661	862-896				
PRRPO_REOVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	666-700							
PRRPO_REOVJ	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	310-361							
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	310-344							
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	310-361							
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPO_ROTPC	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPO_ROTPO	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	255-299	335-397	476-510	518-620	966-1007		
PRRPO_ROTS1	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	62-96	133-167	336-377	581-631	636-686	690-724	771-842	
PRRPO_SBMV	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	60-96	133-167	535-569	579-631	639-686	690-724	771-805	
PRRPO_SCVLA	PROBABLE RNA-DIRECTED RNA POLYMERASE	SOUTHERN BEAN MOSAIC VIRUS	628-665							
PRRPO_TACV	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	100-134	147-191						
PRRPO_TMGMV	RNA POLYMERASE	TACARIBE VIRUS	155-204	220-278	375-416	484-518	891-925	1030-1081	1285-1319	1981-2015
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	401-449	682-720	765-818					
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE)	3-37	401-453	665-699					
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	3-37	401-453	665-699					
PRRPO_TNVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	3-37	401-453	860-894					

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPP_BRSVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	102-144							
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-158	160-216						
PRRPP_HDSV	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	312-373							
PRRPP_HRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-158	160-216						
PRRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	99-158	160-216						
PRRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-158	160-216						
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	99-158	160-216						
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-374	460-495						
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-374	460-495						
PRRPP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-374	460-495						
PRRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	149-183	213-275						
PRRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	214-276							
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-276							
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	100-134							
PRRPP_PI1HB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	100-138							
PRRPP_PI1HC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	80-114	313-364	375-437					
PRRPP_PI1HD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	80-114	313-364	375-437					
PRRPP_PI1HE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	80-114	313-364	375-437					
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/830)	66-114	237-271	313-364	375-437				
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	218-281							
PRRPP_PI2B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	218-281							
PRRPP_PI3H4	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	31-130	414-470						
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	410-499							
PRRPP_PI4HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38	222-285						
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	222-285							
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	137-174							
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	93-127							
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	93-127							
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	93-127							
PRRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127							
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19	93-127							
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	313-364	375-447						
PRRPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	323-364	375-447						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	313-364	375-447						
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	313-364	375-447						
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	313-364	375-447						
PRRPP_SYNV	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-278							
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	SONCHUS YELLOW NET VIRUS	138-173	233-281						
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	3-43							
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN M	3-43							
PRRPP_VSVJO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37							
PRRPP_VSVSJ	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37							
PSPHR_AMEPV	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	3-43							
PSPI2_VACCV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	223-264	361-395						
PSPI2_VARV	SERINE PROTEINASE INHIBITOR	VACCINIA VIRUS (STRAIN WR)	21-86							
PSPI3_VACCC	SERINE PROTEINASE INHIBITOR 2	VARIOLA VIRUS	21-86							
PSPI3_VACCV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-167	225-266						
PSPI3_VARV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN WR)	118-167	225-266						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 5	AREA 6	AREA 5	AREA 8	AREA 7	AREA 8
PSPIA_VACCC	SERINE PROTEINASE INHIBITOR 3	VARIOLA VIRUS	122-171	229-270						
PT2C2_CHVP1	SERINE PROTEINASE INHIBITOR 2 HOMOLOG FIRST	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-65							
PTAA2_VACCV	TYPE II RESTRICTION ENZYME CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	48-85							
PTAG8_FOWPV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS (STRAIN WR, COPENHAGEN, AND VARIOLA VI	95-133	173-207						
PTAG8_VACCV	TRANS-ACTIVATOR PROTEIN FP0	FOWLPOX VIRUS	3-51							
PTAG8_VARV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS (STRAIN WR), (STRAIN COPENHAGEN)	3-51							
PTALA_BFDV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-51							
PTALA_POVBO	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-325	464-498						
PTALA_POVBA	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	303-337	495-537						
PTALA_POVHC	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	464-501	587-621						
PTALA_POVLY	LARGE T ANTIGEN	POLYOMAVIRUS JC	153-187	589-623						
PTALA_POVM3	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41	206-258	437-478					
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	509-544							
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	507-542							
PTAMI_POVHA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	504-539							
PTAMI_POVM3	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	339-378							
PTAMI_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	211-245	388-422						
PTAMI_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	192-226	369-403						
PTASM_POVBO	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	192-226	369-403						
PTASM_POVLY	SMALL T ANTIGEN	BOVINE POLYOMAVIRUS	41-85							
PTATR_NPVAC	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41							
PTATR_NPVBM	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	408-442	46-480	489-523					
PTATR_NPVOP	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	413-447	451-485	494-528					
PTAT_SIVAI	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	391-455	511-554						
PTAT_SIVAI	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	73-109							
PTAT_SIVAI	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	137-185							
PTAT_VILV	TAT PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	28-74							
PTAT_VILV1	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	40-74							
PTAT_VILV2	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	40-74							
PTCB_FLV	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	FELINE LEUKEMIA VIRUS	279-321							
PTEGP_HSV11	T-CELL RECEPTOR BETA CHAIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	27-61							
PTEGP_HSVEA	TEGUMENT PHOSPHOPROTEIN US9									
PTEGP_HSVEB	NONSENSE									
PTEGP_HSVEK	NONSENSE									
PTEGP_HSVSB	NONSENSE									
PTEGU_EBV	NONSENSE									
PTEGU_HCMVA	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	768-802	821-855	938-972	1101-1138	1208-1242	1479-1516	1700-1753	1809-1867
			1870-1916	1920-1954	2108-2149					
PTEGU_HSV11	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	215-249	543-581	700-738	868-909	936-977	1004-1038	1163-1200
			1237-1296	2200-2235						
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	731-765	801-842	1022-1059	1223-1269	1275-1309	1315-1370	1520-1531	1609-1669
			1673-1714	1749-1783	1820-1854	2670-2704				
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	30-71	224-262	567-608	712-757	951-1000	1091-1181	1192-1233	1357-1400
PTEGU_HSVSA	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	560-597	635-683	794-848	908-956	1108-1151	1155-1246	1399-1458	1487-1549
			1619-1657	1661-1695	1702-1736	1806-1843	1947-1981			
PTEGU_VZVD	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	520-558	560-598	615-652	672-710	777-822	846-898	948-986	1287-1332
			1434-1502							
PTERM_ADE02	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	657-696	713-747	804-841	933-972	1117-1158	1415-1471	1528-1562	1572-1620
			1633-1705	1719-1756	1945-1986	2727-2761				
PTERM_ADE05	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	490-572							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	490-592							
PTERM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	491-559							

PEGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PTJUN_AVIS1	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	443-491	497-538						
PTMAF_AVIS4	TRANSFORMING PROTEIN JUN	AVIAN SARCOMA VIRUS (STRAIN 17)	210-284							
PTOP1_SFVKA	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	247-288	295-340						
PTOP2_ASFB7	DNA TOPOISOMERASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	127-183	269-310						
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	146-180	481-515	601-642	945-979	1038-1093	1123-1162		
PTSIS_SMSAV	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	146-180	480-514	600-641	902-936	944-978	1038-1091	1122-1161	
PTYSY_VZVD	PDGF-RELATED TRANSFORMING PROTEIN P28-SIS	SIMIAN SARCOMA VIRUS	16-71							
PUBIL_NPVOP	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-260							
PUL01_HCMVA	UBIQUITIN-LIKE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	43-80							
PUL03_HSV11	HYPOTHETICAL PROTEIN UL1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	169-203							
PUL03_HSV2H	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	94-128							
PUL03_HSVEB	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	92-126							
PUL04_HSV11	GENE 60 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	70-104							
PUL06_EBV	PROTEIN UL4	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	102-136							
PUL06_HCMVA	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-145	313-347	376-410					
PUL06_HSV11	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	216-250							
PUL06_HSVEB	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	36-94	103-141	294-329	337-371	416-479			
PUL06_HSVSA	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	62-170	357-413	448-503					
PUL06_VZVD	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	90-140	151-194	302-336	364-405				
PUL08_HCMVA	VIRION GENE 54 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	87-131	350-409	704-738					
PUL09_HSVEB	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-50							
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	174-208							
PUL11_HCMVA	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL13_HCMVA	NONSENSE									
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-81	185-227						
PUL14_HSVEB	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	305-343							
PUL14_PRVN3	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	52-96	246-283						
PUL14_VZVD	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	43-95							
PUL16_HSVEB	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-103							
PUL17_HSV6U	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	266-300							
PUL21_HSVEB	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102	239-280							
PUL23_HCMVA	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-78	421-474						
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-253							
PUL24_ILTVT	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39							
PUL25_HCMVA	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88	161-195							
PUL25_HSV11	HYPOTHETICAL PROTEIN UL25	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	255-341	351-399						
PUL25_HSVEB	VIRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	370-411							
PUL25_HSVSA	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-413							
PUL25_ILTVT	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-92	183-231	365-406					
PUL25_VZVD	64.1 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88	38-84	165-206						
PUL31_HCMVA	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	340-388							
PUL31_HSVEB	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	244-285							
PUL31_VZVD	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	153-187							
PUL32_HSVEB	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	163-197							
PUL32_VZVD	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (STRAIN AB1)	342-376							
PUL33_HCMVA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	72-106	296-344						
PUL33_VZVD	G-PROTEIN COUPLED RECEPTOR HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	94-135	309-352						
PUL34_EBV	GENE 25 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	29-63							
PUL34_HCMVA	BFRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-200							
PUL34_HSV11	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	113-147							
PUL35_HCMVA	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	187-221							
PUL37_EBV	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	231-268							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUL37_HSV11	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	708-742							
PUL37_HSVEB	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	853-891							
PUL37_HSVSA	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	82-137	311-345	614-648	715-750	781-822			
PUL37_VZVD	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	6-65	682-741						
PUL38_HCMVA	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS).	719-753	786-827						
PUL41_VZVD	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	10-51							
PUL42_HSV11	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRU" (STRAIN DUMAS)	330-366							
PUL42_HSVEB	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	134-168	221-263						
PUL43_HCMVA	DNA-BINDING GENE 18 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	138-172							
PUL43_HSVE4	HYPOTHETICAL PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	72-109							
PUL43_VZVD	MEMBRANE PROTEIN UL43 HOMOLOG	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	27-68							
PUL45_HSV1K	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-363							
PUL45_HSV1M	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	96-137							
PUL47_HCMVA	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	96-137							
PUL47_HSV11	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-165	448-485	745-856					
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	473-518							
PUL47_HSVBP	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F	473-518							
PUL47_HSVE4	80.7 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	561-612							
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	183-246	582-620	825-866					
PUL47_VZVD	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	219-253	371-412	817-866					
PUL50_HCMVA	ALPHA TRANS-INDUCING FACTOR 91.8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	84-135	156-209	664-701					
PUL51_HSV11	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	155-189							
PUL51_HSVE4	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	118-169							
PUL51_HSVEB	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	121-162							
PUL51_VZVD	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	120-161							
PUL52_EBV	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL52_HSV11	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	188-235							
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-223							
PUL52_HSVSA	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	141-182	929-970						
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	445-483							
PUL53_HCMVA	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-342							
PUL55_HSV2H	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-48							
PUL64_HCMVA	PROTEIN UL55	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	151-185							
PUL70_HCMVA	HYPOTHETICAL PROTEIN UL64	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-73							
PUL74_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-99							
PUL87_HSV6U	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-79							
PUL87_HSVSA	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	729-770							
PUL88_HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366-400	582-616						
PUL91_HSVSA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	357-391							
PUL92_EBV	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	24-58							
PUL92_HCMVA	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	188-222						
PUL92_HSV6U	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-116							
PUL92_HSVSA	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	101-145	174-216						
PUL93_HCMVA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	88-122							
PUL95_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	23-57	299-384						
PUL95_HSV6U	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	259-293						
PUL96_HCMVA	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	73-151	213-270						
PUL96_HSV6U	HYPOTHETICAL PROTEIN UL96	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	51-103							
PUL96_HSVSA	HYPOTHETICAL PROTEIN 14R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	53-113							
PUL A2_HCMVA	HYPOTHETICAL GENE 35 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	45-100							
PUL A4_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40	758-792						
PUL D0_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1-56	130-171	330-364	439-492	541-575			

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUNG_HSV11	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	84-125							
PUNG_HSV2J	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	227-268							
PUNG_HSV2H	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	188-229							
PUNG_HSVSA	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52	148-189							
PUNG_SFVKA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176							
PUS02_HSVEB	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115							
PUS02_HSVEK	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	79-120							
PUS07_HCMVA	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	86-120							
PUS11_HCMVA	HYPOTHETICAL PROTEIN HCLF5		2-36							
PUS14_HCMVA	HYPOTHETICAL PROTEIN HCLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								
PUS18_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	3-51							
PUS23_HCMVA	MEMBRANE PROTEIN HWLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	187-225							
PUS24_HCMVA	HYPOTHETICAL PROTEIN HCLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-335	535-578						
PUS26_HCMVA	HYPOTHETICAL PROTEIN HCLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-172							
PUS27_HCMVA	HYPOTHETICAL PROTEIN HCLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-584							
PUS30_HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40							
PV125_AMVLE	HYPOTHETICAL PROTEIN HCLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-169	274-312						
PV143_NPVAC	125 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	18-52	326-367	591-649					
PV16K_TRVPS	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	313-350	1114-1150	1179-1213					
PV16K_TRVSY	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	75-117							
PV1A_BBMV	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	75-117							
PV1A_BMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	21-55	349-405	492-526	710-751	837-884	890-924		
PV1A_CCMV	1A PROTEIN	BROME MOSAIC VIRUS	4-66	348-411						
PV1A_CMVFN	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	4-53	242-276	348-389	487-526				
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-66	393-434	584-619	868-916				
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-66	393-434	584-619	868-916				
PV1A_PSVJ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434						
PV1A_TAV	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	4-66							
PV23K_HSVTH	1A PROTEIN	TOMATO ASPERMY VIRUS	11-59	392-433	857-923					
PV24K_BDV	23.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN HI2)	177-211							
PV25K_NPVAC	24 KD ANTIGEN	BOENA DISEASE VIRUS	63-121	130-171						
PV28K_PLRVI	25 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-50							
PV28K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	116-150							
PV290_ASFL5	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	116-150							
PV29K_PEBV	L1S 290 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L1S57)	138-183							
PV29K_TRVSY	29 6 KD PROTEIN	EARLY BROWNING VIRUS	115-192							
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM), AND (STRAIN PSG)	167-201							
PV2A_CCMV	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	45-79							
PV2A_CMVFN	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	768-806							
PV2A_PSVJ	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	386-420							
PV2A_TAV	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	717-751							
PV30K_TRVTC	2A PROTEIN	TOMATO ASPERMY VIRUS	722-756							
PV360_ASFB7	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	105-218							
PV362_ASFB7	K'360 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	93-87	151-192						
PV363_ASFB7	K'362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	54-102	161-212	290-324					
PV3A_BMV	D'363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	153-199							
PV3A_CMVFN	3A PROTEIN	BROME MOSAIC VIRUS	11-45							
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	215-255							
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	215-255							
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	215-255							
PV51K_ACLSV	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	215-255							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV51K_BWYVF	50.8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	72-106							
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	196-233	404-451					
PV56K_PLRVI	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GB1)	113-147	196-233	407-451					
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	47-81	438-472						
PV58K_BSMV	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	47-81	438-475						
PV66K_BWYVF	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-162	323-371						
PV70K_PLRVI	66.2 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	480-521							
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	98-144	514-548						
PV90K_AMVLE	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	98-144	409-443	514-548					
PVA04_VACCC	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-141							
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	32-66	231-275						
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	32-66	231-275						
PVA06_VACCC	PROTEIN A4	VARIOLA VIRUS	22-66	210-265						
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-213	314-355						
PVA06_VARV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	96-212	313-354						
PVA08_VACCC	PROTEIN A6	VARIOLA VIRUS	97-213	313-358						
PVA08_VARV	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-236							
PVA09_VACCC	PROTEIN A8	VARIOLA VIRUS	176-236							
PVA09_VARV	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-81							
PVA11_VACCC	PROTEIN A9	VARIOLA VIRUS	46-95							
PVA11_VARV	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-134	141-175	219-283					
PVA12_VACCC	PROTEIN A11	VARIOLA VIRUS	98-176	220-284						
PVA12_VARV	PROTEIN A12	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-148							
PVA18_VACCC	PROTEIN A12	VARIOLA VIRUS	111-152							
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN	433-467							
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	307-341	433-467						
PVA20_VACCC	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	307-341	433-467						
PVA20_VARV	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67							
PVA22_VACCC	PROTEIN A20	VARIOLA VIRUS	1-67							
PVA22_VARV	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-69							
PVA23_VACCC	PROTEIN A22	VARIOLA VIRUS	39-80							
PVA23_VARV	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-143	173-207	255-289	344-382				
PVA31_VARV	PROTEIN A23	VARIOLA VIRUS	95-143	173-207	255-289	344-382				
PVA32_VACCV	PROTEIN A31	VARIOLA VIRUS	88-126							
PVA32_VARV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN								
PVA33_VARV	PROTEIN A32	VARIOLA VIRUS	217-251							
PVA36_VACCV	PROTEIN A33	VARIOLA VIRUS	63-97							
PVA36_VARV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	26-67	109-155						
PVA37_VACCC	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	26-67							
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	24-65							
PVA38_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	24-65							
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-91							
PVA38_VARV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-91							
PVA39_VACCC	PROTEIN A38	VARIOLA VIRUS	44-91							
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71							
PVA46_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109							
PVA46_VACCV	PROTEIN A46	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-126							
PVA46_VARV	PROTEIN A46	VACCINIA VIRUS (STRAIN WR)	81-126							
PVA47_VACCC	PROTEIN A46	VARIOLA VIRUS	81-126							
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-96	143-184						
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	62-96	143-184						

.LMOTIS
xif Search Results

GENE	ALLMOTIS	All Viruses (no bacteriophages)								
LE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
/A49_VACCC	PROTEIN A47	VARIOLA VIRUS	62-96	143-184						
/A49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-40	126-160						
/A49_VARV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	3-40	126-160						
/A52_VACCC	PROTEIN A49	VARIOLA VIRUS	3-40	126-160						
/A52_VACCV	PROTEIN A52	VACCINIA VIRUS (STRAIN COPENHAGEN)	91-132							
/A57_VACCC	PROTEIN A52	VACCINIA VIRUS (STRAIN WR)	91-132							
/A57_VACCV	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-168							
/ALI_MSVK	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	134-168							
/ALI_MSVN	ALI PROTEIN	MAIZE STREAK VIRUS (KENYAN ISOLATE)	230-269							
/ALI_MSVS	ALI PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	228-262							
/ALI_SLCV	ALI PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	228-262							
/ALI_TYDVA	ALI PROTEIN	SQUASH LEAF CURL VIRUS	117-151							
/ALI_ABMVW	ALI PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	191-225							
/ALJ_BGMV	ALJ PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	44-78	83-124						
/ALJ_PYMVV	ALJ PROTEIN	BEAN GOLDEN MOSAIC VIRUS	44-78	83-124						
/ALJ_SLCV	ALJ PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	30-78	87-121						
/ALJ_TGMV	ALJ PROTEIN	SQUASH LEAF CURL VIRUS	46-80	91-125						
/AT_CAMVC	ALJ PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	44-78							
/AT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	84-127						
/AT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70							
/AT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-127						
/AT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-127						
/AT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-127						
/AT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	22-70	93-130						
/AT_CERV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70							
/B03_VACCV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	99-138							
/B04_VACCC	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-142							
/B04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-123	321-372	496-530					
/B04_VARV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	89-123	321-372						
/B05_VACC0	PROTEIN B4	VARIOLA VIRUS	89-134	324-372	492-530					
/B05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	254-298							
/B05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-298							
/B05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	254-298							
/B07_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	254-298							
/B08_VACCC	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	28-62							
/B08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-60							
/B18_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-60							
/B18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375	491-532						
/B18_VARV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375	491-532						
/B19_VACCC	PROTEIN B18	VARIOLA VIRUS	337-378	491-532						
/B19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-121							
/B19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN 1)	85-119							
/B20_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	85-119							
/B21_VACCV	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-85							
/BL1_BGMV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	61-95							
/BL1_SLCV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	159-193							
/BL1_TGMV	BL1 PROTEIN	SQUASH LEAF CURL VIRUS	159-193							
/BR1_BGMV	BL1 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	159-193							
/BR1_SLCV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	172-206							
/BR1_TGMV	BR1 PROTEIN	SQUASH LEAF CURL VIRUS	20-61							
/C02_VACCC	BR1 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	25-59							
/C02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-82	262-302	391-442					

GENE	ALLMOTIF	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
GENE	PROTEIN	VIRUS	37-82	262-302	391-442					
/C04_SFVKA	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	175-223	374-408						
/C04_VACCC	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN COPENHAGEN)	12-46							
/C04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46							
/C04_VARV	PROTEIN C4	VARIOLA VIRUS	12-46							
/C05_SFVKA	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	82-125							
/C05_VACCC	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN COPENHAGEN)	31-68							
/C05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	31-68							
/C05_VARV	PROTEIN C5	VARIOLA VIRUS	32-70	73-121						
/C08_SFVKA	PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	45-86							
/C09_SFVKA	HYPOTHETICAL PROTEIN C8	SHOPE FIBROMA VIRUS (STRAIN KASZA)	63-106							
/C09_VACCC	HYPOTHETICAL PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-116	168-226	289-323	575-612				
/C09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	82-116	168-226	289-323	575-612				
/C10_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180							
/C10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-176							
/C10_VARV	PROTEIN C10	VARIOLA VIRUS	136-170							
/C12_SFVKA	PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	2-36							
/C13_SFVKA	HYPOTHETICAL PROTEIN C12	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-46	137-182	189-240					
/C16_VACCC	PROTEIN C13	VACCINIA VIRUS (STRAIN COPENHAGEN)	142-176							
/C17_VACCC	PROTEIN C16/822	VACCINIA VIRUS (STRAIN COPENHAGEN)	100-155	325-359						
/C18_VACCC	PROTEIN C17/823	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-98							
/C19_SFVKA	PROTEIN C18/824	SHOPE FIBROMA VIRUS (STRAIN KASZA)	36-97							
/C19_VACCC	PROTEIN C19	VACCINIA VIRUS (STRAIN COPENHAGEN)	218-252							
/CAP_EBV	PROTEIN C19/825	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	150-184	670-709						
/CAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	136-174	191-225	260-294					
/CAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-175	308-356						
/CAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS	136-174	230-266	311-382					
/CAP_HSVEB	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	150-184	304-352						
/CAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	479-520	673-714	735-799					
/CAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	103-160	292-326						
/CAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	128-198	316-350						
/CG1_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	110-248							
/D003_FOWP1	DNA-BINDING PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	145-181							
/D003_VACCC	92.6 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-157							
/D003_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	123-157							
/D005_VARV	PROTEIN D3	VARIOLA VIRUS	123-157							
/D009_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	126-160							
/D009_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	126-160							
/D009_VARV	PROTEIN D9	VARIOLA VIRUS	126-160							
/D010_FOWP1	PROTEIN D9	FOWLPOX VIRUS (STRAIN FP-1)	65-99	188-222						
/D010_SFVKA	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	4-52							
/D010_VARV	PROTEIN D10	VARIOLA VIRUS	67-105							
/D08P_CAMVC	PROTEIN D10	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	1-35							
/D08P_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	1-35							
/D08P_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	1-35							
/D08P_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	1-35							
/D08P_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	1-35							
/E03_VACCC	DNA-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	282-336							
/E03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	282-336							
/E03_VARV	PROTEIN E3	VARIOLA VIRUS	282-336							
/E03_VACCC	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-61							
/E03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	17-61							
/E03_VARV	PROTEIN E3									

CGENE	ALLMOTIS	All Viruses (no bacteriophage)								
ILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
VE05_VACCC	PROTEIN E5	VARIOLA VIRUS	17-61							
VE05_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-93							
VE05_VACCV	PROTEIN E5	VACCINIA VIRUS (STRAIN DAIREN 1)	38-103							
VE05_VARV	PROTEIN E5	VACCINIA VIRUS (STRAIN WR)	38-103							
VE06_VACCC	PROTEIN E6	VARIOLA VIRUS	38-103							
VE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-139	232-266						
VE06_VARV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	105-139	232-266						
VE18_NPVAC	PROTEIN E6	VARIOLA VIRUS	105-139	367-401						
VE1_HPV1A	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	112-163							
VE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	137-171							
VE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	56-90							
VE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-67	133-167						
VE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	56-90							
VE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	59-96							
VE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	35-89	312-346						
VE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	23-87							
VE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-67	119-174						
VE1_PAPVE	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	265-299							
VE36_NPVAC	E1 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	176-210							
VE2_CRPVK	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-117							
VE2_HPV05	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS)	3-44							
VE2_HPV08	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	5-57	276-310	342-383	437-471				
VE2_HPV16	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	5-55	148-182						
VE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	315-349						
VE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	65-100							
VE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	3-37	159-193						
VE2_HPV31	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	13-47	159-193						
VE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	61-105							
VE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	63-101	297-331						
VE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	62-106	158-192						
VE2_HPV41	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	74-110	323-357						
VE2_HPV42	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	6-54							
VE2_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	5-55	148-182						
VE2_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	154-191							
VE2_HPV52	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	13-47	179-213						
VE2_HPV56	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 52	2-36							
VE2_HPV5B	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 56	5-57							
VE2_PAPVD	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	107-141							
VE2_PAPVE	PROBABLE E2 PROTEIN	DEER PAPILLOMAVIRUS	113-150							
VE2_PCPVI	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	318-361							
VE2_NHPVI	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	62-106	307-341						
VE39_NPVAC	E2 PROTEIN	RHESUS PAPILLOMA VIRUS TYPE 1	20-57							
VE39_NPVOP	EARLY 39 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	119-156							
VE4_HPV18	EARLY 39 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	42-86							
VE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 18	63-97							
VE5_HPV5B	PROBABLE E4 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 41	3-40	96-130						
VEF_GVTN	PROBABLE E5 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 5B	681-719							
VENV_BEV	VIRAL ENHANCING FACTOR (VEF) (104 KD GLYCOP	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	195-229							
VENV_DHV1I	ENVELOPE PROTEIN	BEANE VIRUS (BEV)	318-366							
VENV_MCV1	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	232-286							
VENV_MCV2	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCVI)	252-286							
VENV_THOGV	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCVII)	313-354							
VENV_VACCC	ENVELOPE GLYCOPROTEIN PRECURSOR (SURFACE	THOGOTO VIRUS (THO)								

GENE	ALLSIOTES	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
ENAME	PROTEIN	VIRUS								
ENV_VACCI	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN COPENHAGEN)	257-295							
ENV_VACCP	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN HD-J)	257-295							
ENV_VACCV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN L-IVP)	257-295							
ENV_VACCW	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN WR)	257-295							
ENV_VARV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VARIOLA VIRUS	257-295							
ETS_SPVAC	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	1-53							
F01_VACCC	ECORI-T SITE PROTEIN ETS	VACCINIA VIRUS (STRAIN COPENHAGEN), AND VACCINIA VIRUS	46-80	124-158						
F01_VACCI	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	46-80	124-158						
F01_VACCP	PROTEIN F1 (FRAGMENT)	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110							
F01_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	71-110							
F05_VACCC	PROTEIN F5	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-139	282-320						
F05_VACCP	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	81-139	282-320						
F05_VACCV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	81-139	283-321						
F05_VACCW	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	81-132	281-322						
F06_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	8-44							
F11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-258	269-315						
F11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	213-254	265-311						
F11_VACCV	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	41-75	269-315						
F11_VARV	PROTEIN F11	VARIOLA VIRUS	1-67	102-143	199-236	330-388	544-581			
F12_VACCC	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67	102-143	199-236	330-388	544-581			
F12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	1-67	199-236	330-388	547-581				
F12_VARV	PROTEIN F12	VARIOLA VIRUS	155-194							
F16_VACCC	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-194							
F16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	155-194							
F16_VARV	PROTEIN F16	VARIOLA VIRUS	1-43							
F4P3_FOWPV	PROTEIN F16	FOWLPOX VIRUS	139-173	239-273						
F4P4_FOWPV	PROTEIN F4	FOWLPOX VIRUS	23-57							
F4P7_FOWPV	PROTEIN F4	FOWLPOX VIRUS	77-111							
F4PL_FOWPI	PROTEIN F7	FOWLPOX VIRUS (STRAIN FP-1)	30-64							
F5TUS_VACCC	FPLEFT PROTEIN (FRAGMENT)	VACCINIA VIRUS (STRAIN COPENHAGEN)	30-64							
F5TUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	271-306	512-563	591-647	730-764				
FVG01_HSV11	14 KD FUSION PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	201-339							
FVG01_VACCC	HYPOTHETICAL GENE 1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	240-278							
FVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	301-339							
FVG01_VARV	PROTEIN G1 (FRAGMENT)	VARIOLA VIRUS	301-339							
FVG03_HSVEB	PROTEIN G1	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP) (EHV-1)	143-177							
FVG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A) (EHV-1)	143-177							
FVG03_VARV	GENE 3 PROTEIN (ORF L1)	VARIOLA VIRUS	64-98							
FVG05_VACCC	PROTEIN G3	VACCINIA VIRUS (STRAIN COPENHAGEN)	117-158	255-289	335-389					
FVG05_VACCV	PROTEIN G3	VACCINIA VIRUS (STRAIN WR)	117-158	255-289	335-389					
FVG05_VARV	PROTEIN G3	VARIOLA VIRUS	61-109							
FVG06_HSV11	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	69-103							
FVG07_HSV11	HYPOTHETICAL GENE 7 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	114-175	324-358						
FVG07_VACCC	HYPOTHETICAL GENE 7 MEMBRANE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-175	324-358						
FVG07_VARV	PROTEIN G7	VARIOLA VIRUS	304-338							
FVG09_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	304-338							
FVG09_VACCV	PROTEIN F1 (PROTEIN G9)	VACCINIA VIRUS (STRAIN WR)	304-338							
FVG09_VARV	PROTEIN F1 (PROTEIN G9) (FRAGMENT)	VARIOLA VIRUS	61-97							
FVG10_HSV11	PROTEIN F1 (PROTEIN G9)	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45							
FVG12_SPV1R	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	58-93							
FVG16_HSV5A	GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	93-129	173-211						
FVG17_HSV11	HYPOTHETICAL GENE 16 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	174-208	213-236						
FVG18_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	407-441							
FVG1L_AMEPV	HYPOTHETICAL GENE 18 PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)								
FVG1_SPV1R	GIL PROTEIN									

PEGENE	ALLSUBUNITS	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
ENAME	PROTEIN	VIRUS	110-170	220-337					
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-RBA2 B	287-321						
PVG33_HSV11	CAPSID PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	117-138	437-439	660-893	899-1055		1	
PVG24_HSV11	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	74-108						
PVG29_HSV11	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	184-219						
PVG28_HSV11	HYPOTHETICAL GENE 27 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	233-290						
PVG8R_ANEPV	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	39-63	184-218					
PVG2_SPV1R	HYPOTHETICAL G1R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	185-216						
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-RBA2 B	222-256	285-336					
PVG11_HSV11	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	155-310						
PVG31_HSV11	HYPOTHETICAL GENE 30 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	148-183						
PVG34_HSV11	HYPOTHETICAL GENE 33 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	245-279						
PVG35_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	17-90						
PVG37_HSV11	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	435-472						
PVG38_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV	84-118						
PVG40_HSV11	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	124-158	266-300					
PVG1_SPV1R	HYPOTHETICAL GENE 39 PROTEIN	SPIROPLASMA VIRUS SPV1-RBA2 B	8-49	162-196	201-244				
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	0-54	87-121					
PVG41_HSV11	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	116-150	262-296	324-361	641-677			
PVG43_HSV5A	HYPOTHETICAL GENE 42 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	121-162						
PVG46_HSV11	HYPOTHETICAL GENE 45 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	43-86	939-1078	1231-1321				
PVG48_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	169-207						
PVG48_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	160-417	611-666	733-767				
PVG49_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	66-102						
PVG4R_AMEPV	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	4-38						
PVG4_SPV4	GENE 4 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	89-130						
PVG51_HSV11	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	24-71	89-123					
PVG51_HSV5A	GENE 51 GLYCOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-70	123-157	162-196				
PVG52_HSV11	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	67-127						
PVG54_HSV11	HYPOTHETICAL GENE 54 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	355-396						
PVG55_HSV11	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	101-135						
PVG56_HSV11	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	120-178						
PVG59_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	131-192	378-412	644-678	790-784	846-880	1111-1145	
PVG59_HSV5A	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	10-72	89-123					
PVG9_SPV1R	GENE 59 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	169-209						
PVG61_HSV11	GENE 9 PROTEIN	SPIROPLASMA VIRUS SPV1-RBA2 B	65-103						
PVG63_HSV11	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	285-299						
PVG65_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	346-384						
PVG66_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	803-839	1213-1254					
PVG67_HSV11	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	134-188	328-410					
PVG68_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	101-146	1321-1369	1478-1541				
PVG72_HSV11	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	379-413						
PVG75_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	243-288						
PVG8_SPV1R	HYPOTHETICAL GENE 73 PROTEIN	SPIROPLASMA VIRUS SPV1-RBA2 B	5-51	723-757	912-949				
PVGF1_IBVB	GENE 8 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)(I	142-179	1233-1267	2119-2156	3388-3424	3478-3513	3517-3556	3761-3795
PVGII_HCMVA	F1 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)							
PVGL1_CVPR8	GLYCOPROTEIN 11301 PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/113/P0047 BRU	213-257						
PVGL2_CVBF	E1 GLYCOPROTEIN PRECURSOR (MATRIX GLYCOP	BOVINE CORONAVIRUS (STRAIN F15	642-676	850-885	993-1088	1263-1305			
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN L9)	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN LY-138)	642-676	850-885	993-1109	1263-1305			
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN MEBUS)	642-676	850-885	993-1109	1263-1305			
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN QUEBEC)	642-676	850-885	993-1109	1263-1305			
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO								

PCGENE	ALLANOTES	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILE NAME	PROTEIN	VIRUS	642-676	830-885	993-1109	1263-1305			
PVGL2_CVH33	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN VACCINE)	770-916	1055-1113					
PVGL2_CVH14	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	HUMAN CORONAVIRUS (STRAIN 229E)	643-686	1001-1117	1170-1315				
PVGL2_CVAIA5	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	643-686	1001-1117	1170-1315				
PVGL2_CVAIJC	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN A59)	591-633	949-1079	1118-1263				
PVGL2_CVAIJH	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	643-686	1001-1117	1170-1315				
PVGL2_CVAIJU	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN JHM)	101-143	860-976	1129-1174				
PVGL2_CVPIS	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-933	1040-1086	1332-1389	
PVGL2_CVPII	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-933	1040-1086	1332-1389	
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	70-110	446-480	690-731	887-921	1038-1084	1330-1387	
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1038-1084	1330-1387	
PVGL2_CVPR8	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / 8RU)	224-258	468-509	665-699	816-963	1128-1165		
PVGL2_CVPRAH	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RAH) (PRCV)	224-258	468-509	665-699	816-963	1128-1165		
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1038-1084	1330-1387	
PVGL2_ENV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	68-102						
PVGL2_IIPV	PROBABLE MEMBRANE GLYCOPROTEIN		189-245	451-485	695-736	892-926	1043-1089	1335-1392	
PVGL2_IBVS	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	791-903	1017-1091					
PVGL2_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	417-478	772-904	1036-1090				
PVGL2_IBVD3	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	417-478	772-904	1036-1090				
PVGL2_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	417-478	772-904	1036-1090				
PVGL2_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8533)	417-478	772-904	1036-1090				
PVGLB_HCMVA	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	43-88	128-162	416-484	844-878			
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-88	128-162	417-478	451-485	865-899		
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	828-890						
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	827-889						
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	827-889						
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	828-890						
PVGLB_HSV2J	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	828-890						
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN JJ)	828-890						
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	827-889						
PVGLB_HSV6U	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAP)	827-871						
PVGLB_HSV81	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	33-71	185-223					
PVGLB_HSV82	GLYCOPROTEIN 1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1	859-913						
PVGLB_HSVBC	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BAN)	440-474	848-902					
PVGLB_HSVE1	GLYCOPROTEIN 1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	863-900						
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS15A)	342-376	911-961					
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	474-513	867-900					
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	342-376	911-961					
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	342-376	911-961					
PVGLB_HSVAD	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	342-376	910-960					
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	190-435	649-683	787-815				
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	240-288	406-447					
PVGLB_PRVIF	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	206-260	427-475	691-734	744-778	860-894		
PVGLB_VZVD	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	847-881						
PVGLC_HSV11	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	92-133	396-430	809-867				
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510						
PVGLC_HSV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510						
PVGLC_HSV21	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	443-476						
PVGLC_HSVBC	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	443-477						
PVGLC_HSVE1	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	335-369						
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	332-318						
PVGLC_HSVAD	GLYCOPROTEIN C PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	61-97						
PVGLC_HSVAD	SECRETORY GLYCOPROTEIN GP53-45 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	61-97						
PVGLC_HSVAG	SECRETORY GLYCOPROTEIN GP53-45 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	61-96						
PVGLC_HSVAM	SECRETORY GLYCOPROTEIN GP53-45 PRECURSOR								

PGGENE	ALLNOTES	All Viruses (no Bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVGLC_PRVIF	SECRETORY GLYCOPROTEIN GP57 oR PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	63-97							
PVGLC_VZVD	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / DECKE	183-235							
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	280-321							
PVGLD_HSVEA	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	280-321							
PVGLD_HSVEB	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	89-123							
PVGLD_HSVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	139-173							
PVGLE_HSV11	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	139-173							
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	110-145							
PVGLF_BRSVA	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-159							
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	146-202	504-545						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	146-202	267-302	506-547					
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	146-202	267-302	506-551					
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	228-297	340-381	568-602					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	116-203	267-302	506-549					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	116-202	267-302	506-549					
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	116-202	267-302	506-547					
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	116-202	267-302	506-549					
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON) AND (STRAIN HALLE)	116-184	228-269	452-500					
PVGLF_MLASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	119-187	231-272	455-503					
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	116-184	228-269	452-500					
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	103-179	235-272	447-502				
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	103-179	235-272	447-502				
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	103-179	235-272	447-502				
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	20-54	103-179	235-272	447-502				
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	117-182	231-272	426-512					
PVGLF_NDVBI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	122-182	231-272	426-517					
PVGLF_NDVH	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	117-182	231-272	426-517					
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	122-182	231-272	426-517					
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	133-183	238-272	426-517					
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	133-183	231-272	426-517					
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	117-182	231-272	426-512					
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	122-182	231-272	433-512					
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	117-182	231-272	426-517					
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	122-182	231-272	426-517					
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	122-182	231-272	426-512					
PVGLF_PHHC	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	29-63	197-266	309-350	533-581				
PVGLF_PI3H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	123-174	207-267	459-503					
PVGLF_PI3HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	93-183	477-528						
PVGLF_PI3HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	93-183	477-528						
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	93-185	477-528						
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	117-182	207-241	456-518					
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	117-182	207-241	462-532					
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KADETE O)	112-180	224-265	448-493					
PVGLF_SENDS	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	112-180	224-265	448-506					
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	127-188	211-271	463-533					
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	127-188	211-271	463-533					
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	127-188	211-271	463-533					
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	127-188	211-271	463-533					
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	127-188	211-271	463-533					
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	96-186	454-508						
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	103-171	241-275	451-487					
PVGLG_HEPV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (	105-161	190-224	457-498					

PEGASE	ALLANOTES	All Viruses (no bacteriophage!)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILESAVE	PROTEIN	VIRUS	506-612						
PVGLG_BRSVC	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	104-138						
PVGLG_HRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COMPTAGE	10-70						
PVGLG_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	10-81						
PVGLG_HRSV2	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD042)	10-85						
PVGLG_HRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD1734	10-85						
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD1833)	10-107						
PVGLG_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD6190)	10-85						
PVGLG_HRSV6	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6236)	10-85						
PVGLG_HRSV7	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD6614)	10-85						
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	10-81						
PVGLG_HRSVA	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	10-67						
PVGLG_HRSVL	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	21-85						
PVGLG_HRSVE	MAJOR SURFACE GLYCOPROTEIN G	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	271-305						
PVGLG_SIGNA	GLYCOPROTEIN G PRECURSOR	SIGNAL	464-498						
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SINCTIUS YELLOW NET VIRUS	344-381						
PVGLG_VHSV0	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	488-523						
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	363-397						
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	476-510						
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	53-87	160-201	336-380	653-694			
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	103-137	270-311	693-741				
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN 17)	102-136	692-740					
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	447-481						
PVGLH_HSV1G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	447-481						
PVGLH_HSV2G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	333-406						
PVGLH_HSV8C	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G5)	364-416						
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	394-439	414-455					
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	333-373	407-448					
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HV	13-66	374-433	664-712				
PVGLH_HCMVS	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	440-474						
PVGLH_PRVKA	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	226-260						
PVGLH_PRVNJ	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN KAPLAN)	226-260						
PVGLH_PRVU	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN NIA-3)	226-260						
PVGLH_VZVD	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN BUCE)	455-506						
PVGLI_HCMVA	PROBABLE GLYCOPROTEIN H PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	47-111	323-359					
PVGLI_BUNGE	INTERMEDIATE EARLY GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	512-567	615-737	1218-1262				
PVGLN_BUNLJ	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	643-677	916-950					
PVGLN_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	643-677						
PVGLN_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	340-374	504-561	905-939				
PVGLN_DUGBV	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	933-989	1239-1300					
PVGLN_HANTB	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	693-727						
PVGLN_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	72-106						
PVGLN_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HO/O)	72-106						
PVGLN_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	72-106						
PVGLN_INSV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	72-106						
PVGLM_PHV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	1067-1101						
PVGLN_PTPV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	33-111						
PVGLM_SEOUA	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	149-231						
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	693-727						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN B2)	694-728						
PVGLN_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	693-730						
PVGLP_BEV	NONSTRUCTURAL GLYCOPROTEIN GNS PRECURSO	BOVINE EPHEMERAL FEVER VIRUS	377-414	511-569					
PVGLX_PRVJ	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	41-82	90-134	622-656	1128-1236			
PVGLY_TUNIN	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN BUCE)	420-461						
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TUNIN ARENAVIRUS	301-349						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVGLY_LASSI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	317-360	388-422						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	318-361	389-423						
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	333-367	395-432						
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	124-158	333-367	395-432					
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	316-359							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	334-375							
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	315-363							
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	303-351	382-416						
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	302-350	381-415						
PVGNB_CPMV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	303-351	382-416						
PVGNA1_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	835-869							
PVGNA1_CPSMV	GENOME POLYPROTEIN A1	COWPEA MOSAIC VIRUS	160-201							
PVGNA1_RCMV	GENOME POLYPROTEIN A1	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-226	758-792	874-915					
PVGP1_CRV	GENOME POLYPROTEIN A1	RED CLOVER MOTTLE VIRUS	837-871	912-946						
PVGP_EBOV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	94-149							
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	280-321	334-368	469-503					
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	562-596							
PVH02_VACCC	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	562-596							
PVH02_VACCV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-92							
PVH02_VARV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN WR)	58-94							
PVH05_VACCC	LATE PROTEIN H2	VARIOLA VIRUS	58-92							
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-185							
PVH05_VARV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	118-185							
PVHEL_LSV	PROTEIN H5	VARIOLA VIRUS	136-203							
PVHRP_VACCC	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	126-160							
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	216-279							
PVI03_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	216-279							
PVI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	150-193	210-244						
PVI03_VARV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	150-193	210-244						
PVI06_VACCV	PROTEIN I3	VARIOLA VIRUS	150-193	210-244						
PVI06_VARV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	58-92							
PVI07_VARV	PROTEIN I6	VARIOLA VIRUS	58-92							
PVI08_VACCC	PROTEIN I7	VARIOLA VIRUS	373-407							
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	548-589							
PVI08_VARV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	548-589							
PVIE1_HCMVA	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	548-589							
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	78-112	171-205	368-402	416-450				
PVIE1_MCMVS	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	78-112	171-205	368-402	416-450				
PVIE2_NPVOP	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	244-297							
PVIEN_NPVAC	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	94-128	305-395						
PVIF_CAEVC	IMMEDIATE-EARLY REGULATORY PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	277-407							
PVIF_EIVPE	VIRION INFECTIVITY FACTOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	23-92							
PVIF_FIVSD	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	33-94							
PVIF_HIVIA2	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	32-80							
PVIF_HIVIB1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-42	62-96						
PVIF_HIVIB5	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (DH10,BRU,HXB2,PV	1-42	62-96						
PVIF_HIVIEL	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	1-42	62-96						
PVIF_HIVIR	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1-42	62-96						
PVIF_HIVIMA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	1-42	62-96						
PVIF_HIVIMN	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-36							
PVIF_HIVIN5	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	1-42	62-96						
PVIF_HIVINA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	1-42	62-96						

PGENE	ALLNOTES	All Viruses (no Bacteriophage!)	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4
FULLNAME	CPOTEIN	VIRUS	1-43	62-96						
PVIF_IIVIND	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIT-1)	1-43	62-96						
PVIF_IIVIOY	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	1-43	62-96						
PVIF_IIVIAJ	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	1-43	62-96						
PVIF_IIVIU4	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PRIAT ISOLATE)	1-43	62-96						
PVIF_IIVIZ1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	1-43	62-96						
PVIF_IIVIZ6	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	1-43	62-96						
PVIF_IIVID2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.1)	1-43	62-96						
PVIF_IIVIN2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	147-193							
PVIF_IIVIRO	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	152-193							
PVIF_OMVVS	VIRION INFECTIVITY FACTOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	161-197							
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	44-114							
PVIF_SIVAG	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	2-58	150-202						
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3) ISOLATE)	17-58							
PVIF_SIVAT	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	2-36	140-187						
PVIF_SIVCZ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	20-58	150-195						
PVIF_SIVGB	VIRION INFECTIVITY FACTOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS	1-43							
PVIP_HSV11	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	1-39							
PVINP_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	85-134							
PVINP_HSVSA	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	148-182	333-369						
PVINP_VZVD	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-129							
PVINT_SSV1	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-151	155-189	267-301					
PVM01_VACCC	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	85-130	138-172						
PVM01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56							
PVM01_VARV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56							
PVK03_VACCC	PROTEIN J1	VARIOLA VIRUS	22-56							
PVK03_VACCV	PROTEIN K3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-82							
PVK07_VACCV	PROTEIN K3	VACCINIA VIRUS (STRAIN WR)	38-82							
PVL02_VACCC	PROTEIN K7	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	115-149							
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-81							
PVL02_VARV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	47-92							
PVL1_CRVVK	PROTEIN L2	VARIOLA VIRUS	47-81							
PVL1_FPVL	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	281-295	331-383						
PVL1_FPVS	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	18-90							
PVL1_HPV05	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	335-393							
PVL1_HPV1A	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	334-392							
PVL1_HPV47	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	345-339							
PVL1_PAPVD	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	333-391							
PVL1_REOVD	PROBABLE L1 PROTEIN	DEER PAPILLOMAVIRUS	23-57							
PVL2_HPV05	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	94-142	437-471						
PVL3_HPV05	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE	341-375							
PVL3_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	334-392							
PVL3_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	295-333							
PVL3_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	345-379							
PVL3_HPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	318-326							
PVL3_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	292-333							
PVL3_HPV47	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	341-375							
PVL3_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	293-327							
PVL3_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	341-375							
PVL3_REOVD	PROBABLE L2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	107-148	1112-1178						
PVL3_REOVI	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN DJIONES)	1112-1178							
PVL96_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	107-148	331-365	1112-1178					
PVM01_VACCC	L96 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	198-336						

PFIGENE	ALLANOTIS	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILE_NAME	PROTEIN	VIRUS								
PVAII_REOVL	PROTEIN M1	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-56							
PVAII_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	287-321							
PVAI2_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	418-450	619-663						
PVAI2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	418-450	618-662						
PVAI2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DYJONES)	418-450	618-662						
PVAI2_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN LANG)	418-450	618-662						
PVAI4_BRSVA	MAJOR NONSTRUCTURAL PROTEIN NU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	135-190	337-371	522-558	618-690				
PVAI4_HRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	42-90							
PVAI4_TRTV	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	42-90							
PVAI4_CDVO	MATRIX GLYCOPROTEIN M2	TURKEY RHINOTRACHEITIS VIRUS	16-70							
PVAI4_INCJ	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	193-234							
PVAI4_NDVA	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	73-114	151-208						
PVAI4_NDVD	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	310-358							
PVAI4_PI1B	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C48)	324-358							
PVAI4_PI3H4	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	99-133	204-252						
PVAI4_RABVA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	99-133	204-252						
PVAI4_RABVC	MATRIX PROTEIN	RABIES VIRUS (STRAIN ATCC)	69-103							
PVAI4_RABVE	MATRIX PROTEIN	RABIES VIRUS (STRAIN CVS-11)	69-103							
PVAI4_RABVN	MATRIX PROTEIN	RABIES VIRUS (STRAIN ERA)	69-103							
PVAI4_RABVP	MATRIX PROTEIN	RABIES VIRUS (STRAIN NISHIGAHARA RC11)	69-103							
PVAI4_RABVS	MATRIX PROTEIN	RABIES VIRUS (STRAIN PV)	69-103							
PVAI4_SYNV	MATRIX PROTEIN	RABIES VIRUS (STRAIN SAD B19)	69-103							
PVAI4_VSVIG	MATRIX PROTEIN	SONCHUS YELLOW NET VIRUS	246-286							
PVNE1_CVBN	MATRIX PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	190-232							
PVNE1_CVPI5	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN NEBU5)	135-209							
PVNE1_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	98-146	212-257						
PVNE1_CVTRN	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	212-257							
PVNE1_CVTRE	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	212-257							
PVNE1_IBV	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	21-62	175-209						
PVNE1_IBV6	E1 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	212-257							
PVNE1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M42)	21-55	177-218						
PVNE1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-55	177-218						
PVNE1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE N	21-55	177-218						
PVNEN_EBV	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB0522)	177-218							
PVNP_CAMVC	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	16-54							
PVNP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	187-234	270-324						
PVNP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	187-234	270-324						
PVNP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D8C)	187-234	270-324						
PVNP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	187-234	270-324						
PVNP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	187-234	270-324						
PVNP_CERV	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	187-234	270-324						
PVNP_FMVD	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	212-246							
PVNP_SOCMV	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	213-251							
PVNSA_IDBDB	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	76-118							
PVNSA_IDBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S	272-313	324-361						
PVNSA_IDBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	271-312	323-360						
PVNSA_IDBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	234-275	289-323						
PVNSA_IDBGS	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S)	272-313	324-361						
PVNSA_IDBHE	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	210-244							
PVNSA_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328							
PVNSA_WHV9	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	268-302							
PVNSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	213-247							

PGENE	ALLSEQ15	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
HEPBSAG	VIRUS		213-247							
HEPBSAG	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS ?	213-247							
PVHSA_WHVH	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS ? (INFECTIOUS CLONE)	213-247							
PVNI1_DHVH1	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	201-235							
PVNI1_IAANN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	92-126	174-222						
PVNI1_IAHAN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	92-126	174-222						
PVNI1_IACAO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/CAMELID/MONGOLIA/1/72)	91-79							
PVNI1_IAFPR	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND (STR	92-126	174-222						
PVNI1_IAFPR	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	92-126	174-222						
PVNI1_IAFPW	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	92-126	174-222						
PVNI1_IALEI	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	92-126	174-222						
PVNI1_IALE2	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1/57)	92-126	174-222						
PVNI1_IANEW1	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ALLARD/NEW YORK/15/40)	92-126	174-222						
PVNI1_IAPUE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PORT CHALMERS/1/73)	92-126	174-222						
PVNI1_IAPUE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	92-126	174-222						
PVNI1_IAUDO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	92-126	174-222						
PVNI1_IAWIL	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	92-126	174-222						
PVNI1_IAZJE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	92-126	174-222						
PVNI1_INBAC	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	175-209							
PVNI1_INBLE	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	175-209							
PVNI1_INBSI	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	175-209							
PVNI1_INBAC	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	175-209							
PVNI2_INBAD	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	132-184							
PVNI2_INBLE	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	132-184							
PVNI2_INBSI	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	132-184							
PVNI2_INYXV	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	132-184							
PVNO1_VACCC	M-T1 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	46-80	145-197						
PVNO1_VACCV	PROTEIN N1	VACCINIA VIRUS (STRAIN COPENHAGEN)	64-113							
PVNO1_VACCV	PROTEIN N1	VACCINIA VIRUS (STRAIN WR)	64-113							
PVNS4_ROTBS	PROTEIN N1	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-169							
PVNS4_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-117	121-169						
PVNCA_AAV3	NONSTRUCTURAL PROTEIN NS34	ADENO-ASSOCIATED VIRUS 2	91-123	217-251						
PVNCN_RSV	DNA REPLICATION PROTEIN	RICE STRIPE VIRUS	129-163							
PVNCN_PAVBO	MAJOR NONCAPSID PROTEIN	BOVINE PARVOVIRUS	221-255							
PVNCS_ADVG	PROBABLE NONCAPSID PROTEIN NP1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	19-60	170-204						
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002)	276-339	321-371	385-440	715-760	780-849			
PVNCS_FPV10	NONCAPSID PROTEIN NS-1	FELINE PANLEUKOPENIA VIRUS (STRAIN 19)	53-98							
PVNCS_MEVA	NONCAPSID PROTEIN NS-1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	53-98							
PVNCS_MVMM	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	53-91	201-297						
PVNCS_MVMV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	53-87	259-297						
PVNCS_PAVBO	NONCAPSID PROTEIN NS-1	BOVINE PARVOVIRUS	181-222							
PVNCS_PAVCN	PROBABLE NONCAPSID PROTEIN NS1	CANINE PARVOVIRUS (STRAIN N)	53-98							
PVNCS_PAVIB	NONCAPSID PROTEIN NS-1	INDIAN PARVOVIRUS B19	238-270							
PVNCS_PAVIH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	53-76	259-297						
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-77	169-210	109-146					
PVNS1_BTV10	NONCAPSID PROTEIN NS-1	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	107-141							
PVNS1_BTV17	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	107-141							
PVNS1_BTVIA	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	107-141							
PVNS1_BTVIS	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	107-141							
PVNS1_BTV20	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 20 / ISOLATE AUSTRALIA)	107-141							
PVNS1_EHDV2	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	401-434							
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	48-83							
PVNS1_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMELID/MONGOLIA/1)	37-71							
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/27)	48-83							

PGENE	ALLAIOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	49-83							
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	46-80							
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	49-83							
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	46-80							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	46-80							
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	49-83							
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND (STRA	49-83							
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	49-83							
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	49-83							
PVNS1_IALN6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	49-83							
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76	49-83							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	49-83							
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78	49-83							
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MIYNAJI/HANEDA-TIIAI/76)	46-80							
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79	49-83							
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	49-83							
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78	49-83							
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	49-83							
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	49-83							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/14	49-83							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	49-83							
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	49-83							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61	46-80							
PVNS1_IAZ11	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	49-83							
PVNS1_INBAC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	49-83							
PVNS1_INBGA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	143-177							
PVNS1_INBHK	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/GA/86)	143-177							
PVNS1_INBHT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73), AND (STRAIN	143-177							
PVNS1_INBID	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/HT/84)	143-177							
PVNS1_INBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ID/86)	143-177							
PVNS1_INBMD	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	143-177							
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	143-177							
PVNS1_INBRU	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	143-177	277-337						
PVNS1_INBSI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/RU/69)	139-173							
PVNS1_INBSJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	143-177							
PVNS1_INBVJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	143-177							
PVNS1_INBYA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/VICTORIA/87)	143-177							
PVNS2_AHSV9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73))	143-177							
PVNS2_BTVI7	NONSTRUCTURAL PROTEIN NS2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	67-101							
PVNS2_BTVIX	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	203-237							
PVNS2_CVMJH	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	203-237							
PVNS2_EIDV2	NONSTRUCTURAL PROTEIN NS2	MURINE CORONAVIRUS MHV (STRAIN JHM)	71-105							
PVNS2_IAALA	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	206-272	276-311						
PVNS2_IAANA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77), AND (STRAIN A/U	14-93							
PVNS2_IAANN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	14-93							
PVNS2_IACHI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60), AND (STRAIN	14-93							
PVNS2_IACKG	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	14-93							
PVNS2_IACKJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	14-79							
PVNS2_IADA2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	11-90							
PVNS2_IADE1	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	14-79							
PVNS2_IADU3	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	11-90							
PVNS2_IAFOM	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	11-90							

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
	VIRUS								
	PROTEIN								
PVNS1_IAIOV	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PORT MONMOUTH/1/47)	14-93						
PVNS1_IAIPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PORT WARREN/1/50)	14-93						
PVNS1_IAIPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	14-93						
PVNS1_IALE2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1957)	14-93						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	14-93						
PVNS1_IANA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	14-79						
PVNS1_IANA8	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/23/78)	14-79						
PVNS1_IANAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	14-93						
PVNS1_IANAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	14-93						
PVNS1_IANYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/NYNAIU/1/NEDA-TIAU/78)	11-90						
PVNS1_IAP10	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	14-93						
PVNS1_IAP11	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/131/79)	14-79						
PVNS1_IAP12	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/76/78)	14-93						
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	14-93						
PVNS1_IATK8	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/DETTLEHEM-GLRL1/14	14-79						
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71	11-52						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61	14-93						
PVNS1_IMBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	14-93						
PVNS1_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40	2-43	59-119					
PVNS1_INCII	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	2-43	59-119					
PVNS1_PVN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/1/50)	13-98						
PVNS1_AIISV1	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	70-104						
PVNS1_AIISV9	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 1)	44-78	166-215					
PVNS1_BRD	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	13-78	88-122	166-215				
PVNS1_CVPF5	NONSTRUCTURAL PROTEIN NS1	BROADHAVEN VIRUS	28-98	102-147					
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	11-51						
PVNS4_RSV	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	11-51						
PVNS1_CVCAE	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	2-40						
PVNS1_CVFE3	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-47						
PVNS1_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	1-42						
PVNSC_CDVO	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	1-42						
PVNSC_MEASE	NONSTRUCTURAL PROTEIN C	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	50-84	95-152					
PVNSC_MEASI	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN EDMONSTON)	43-84						
PVNSC_MEASY	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN IP-3-CA)	43-84						
PVNSC_PIIIID	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN YASNAGATA-1)	43-84						
PVNSC_PIIIIC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C15)	113-167						
PVNSC_PIIIID	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	113-167						
PVNSC_PIIIIE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-971)	113-167						
PVNSC_PIIIIH	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-1401)	40-73	113-167					
PVNSC_SEND6	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-113	161-199					
PVNSC_SENDH	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN 6/4)	113-167						
PVNSC_SENDZ	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN HARRIS)	113-167						
PVNSM_RSV	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN Z)	113-167						
PVNST_BUNGE	NONSTRUCTURAL PROTEIN NS-N1	INPATIENS NECROTIC SPOT VIRUS (INSV)	44-102	202-296					
PVNST_BUNLJ	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS GERMISTON	34-75						
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE (ISOLATE L74)	5-39						
PVNST_BUNGV	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	5-39						
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	MAGUARI VIRUS	35-69						
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS (TOS)	144-181						
PVNUA_PRVKA	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS (UUK)	139-173						
PVNUC_DHVII	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	1134-1175						
PVNUC_EBOV	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	209-241						

PCGENE	ALLNIOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVNUC_IAANA	NUCLEOPROTEIN	EBOLA VIRUS	191-225	227-261	329-369					
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	1-42	96-154	357-408					
PVNUC_IAARA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	357-408						
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	1-42	357-408						
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	96-154	357-408					
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	1-42	357-409						
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	1-42	96-154	357-408					
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	1-42	96-154	357-408					
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80)	1-42	96-154	357-408					
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	1-42	96-154	357-408					
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	1-42	96-154	360-408					
PVNUC_IADE2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	1-42	96-154	357-408					
PVNUC_IADEK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	1-42	96-154	357-408					
PVNUC_IADHJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/1/75)	1-42	96-154	357-408					
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74	1-42	96-154	357-408					
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	1-42	96-154	357-408					
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	1-42	96-154	357-408					
PVNUC_IAENS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	96-154	357-408						
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1935)	1-42	357-409						
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	1-42	357-409						
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	357-408							
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/	1-42	96-154	357-408					
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	96-154	360-408					
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	1-42	103-154	357-408					
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	1-42	357-408						
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	96-154	357-409						
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	1-42	96-154	357-409					
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	1-42	96-154	357-409					
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	1-42	96-154	357-409					
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	1-42	96-154	357-409					
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	1-42	96-154	357-409					
PVNUC_IAHUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HUCKOX/40)	1-42	357-409						
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	1-42	96-154	357-408					
PVNUC_IAHM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	96-154	357-408					
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	1-42	96-154						
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	1-42	357-409						
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	1-42	357-409						
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	96-154	357-408						
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-154	357-408					
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	357-409						
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	1-42	357-409						
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-154	357-408					
PVNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	1-42	96-154	357-408					
PVNUC_IANE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MUNK/SWEDEN/84)	1-42	96-154	357-408					
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	1-42	96-154	357-408					
PVNUC_IAOIU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	357-409						
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	1-42	357-409						
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	1-42	96-154	357-408					
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	357-409						
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	1-42	96-154	357-408					
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	1-42	96-154	357-409					
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	1-42	357-408						

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPURE/1/57)	1-42	357-409						
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	1-42	96-154	357-408					
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	1-42	96-154	357-408					
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	1-42	96-154	357-408					
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	1-42	96-154	360-408					
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	1-42	96-154	357-405					
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	1-42	357-409						
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	1-42	357-409						
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	1-42	357-408						
PVNUC_IAWIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	357-408							
PVNUC_IAWIP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	1-42	96-154	357-409					
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/19/76)	1-42	96-154	357-408					
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	1-42	357-409						
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3333/88)	1-42	96-154	357-408					
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	1-42	96-154	357-408					
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	1-42	96-154	357-408					
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	1-42	357-409						
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/81)	1-42	357-409						
PVNUC_IAZH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	1-42	96-154	357-408					
PVNUC_IAZH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	1-42	357-409						
PVNUC_IAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	1-42	96-154	357-408					
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	1-42	96-154	357-408					
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	96-154	357-408					
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	1-42	96-154	357-408					
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	1-42	96-154	357-408					
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	1-42	96-154	357-408					
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	1-42	96-154	357-408					
PVNUC_IAZI4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	1-42	96-154	357-408					
PVNUC_IAZIA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	1-42	96-154	357-408					
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	1-42	96-154	357-408					
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	1-42	96-154	357-408					
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	1-42	96-154	357-408					
PVNUC_IAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	1-42	96-154	357-408					
PVNUC_IAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	1-42	96-154	357-408					
PVNUC_IAZWI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	1-42	96-154	357-408					
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	1-42	96-154	357-408					
PVNUC_INBAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	1-42	96-154	357-408					
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/86)	75-142	480-514						
PVNUC_INBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	75-142	480-514						
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	75-145	480-514						
PVNUC_INBSI	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	75-146	480-514						
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	75-142	480-514						
PVNUC_MABVM	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	93-203	406-447						
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	173-207	322-407						
PVO01_VACCC	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	173-207	322-407						
PVO01_VARV	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	102-145	245-279	341-382	581-615				
PVORI_FXMV	PROTEIN O1	VARIOLA VIRUS	102-145	245-279	341-382	581-615				
PVORI_NMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	293-327							
PVORI_PMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	1519-1575							
PVORI_PVMR	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS (PMV)	1-39	299-337	1474-1532					
PVORI_PVX	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	597-638	682-759						
PVORI_PVXCP	165 KD PROTEIN	POTATO VIRUS X (PVX)	516-550							

PC GENE	ALL MOTIFS	All Viruses (no bacteriophages)								
ID ENTRY	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVORI_SMYEA	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP) (PVX)	510-547							
PVORI_WCMVM	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYE	308-342	931-965						
PVORI_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	1240-1289							
PVP10_NPVAC	149 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	1240-1289							
PVP10_NPVOP	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	1-41							
PVP10_RBSDV	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-50							
PVP10_RGDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	339-382	395-429	506-556					
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS (RGDV)	186-223							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	220-254							
PVP11_WTV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS (RDV)	25-80	273-314						
PVP12_RDV	NONSTRUCTURAL PROTEIN PNS11	WOUND TUMOR VIRUS (WTV)	16-74							
PVP12_WTV	NONSTRUCTURAL PROTEIN P11	RICE DWARF VIRUS (RDV))	140-181							
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (WTV)	68-108							
PVP19_HSVEB	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	68-108							
PVP23_HCMVA	CAPSID ASSEMBLY AND DNA MATURATION PROTE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	189-231							
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-82	146-180						
PVP24_EBOV	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	47-81							
PVP26_HSVEB	MEMBRANE-ASSOCIATED STRUCTURAL PROTEIN V	EBOLA VIRUS	166-200							
PVP26_HSVSA	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	36-77							
PVP26_NPVOP	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN II)	41-78							
PVP26_VZVD	P26 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	118-159							
PVP2_AHSV4	CAPSID PROTEIN VP26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	47-81							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	136-188	270-304	410-465	614-662	684-720	976-1036		
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	168-225							
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	77-111	559-593						
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	77-111	168-209						
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-153	576-610	668-702					
PVP2_ROTBR	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	72-106	247-301	405-453	461-493	895-929			
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	2-94	482-516	523-557	607-655	675-754			
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	2-94	483-517	524-558	608-656	676-755			
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	17-97	492-526	533-567	617-658	685-764			
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	1-50	52-99	194-228	515-551	599-643	705-746		
PVP30_ASFE7	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96	483-517	608-656	680-755				
PVP31_FRGJV	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75) (ASFV)	29-89							
PVP32_ASFB7	EARLY 31 KD PROTEIN	FROG VIRUS 3 (FV3)	227-261							
PVP35_EBOV	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN DA7IV) (ASFV)	29-89							
PVP35_NPVAC	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	80-119							
PVP35_NPVBM	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	54-102							
PVP35_VACCC	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS (BMNPV)	54-102	224-258						
PVP35_VACCP	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	140-181							
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN L-IVP)	17-51							
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	140-181							
PVP3_AHSV4	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	141-182							
PVP3_BTV10	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	133-214	240-274	667-704					
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-255	853-894						
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-255	853-894						
PVP3_EHDV1	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA	214-255	853-894						
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	208-246	798-832	851-892					
PVP3_GFLV	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	208-246	735-770	798-832	851-892				
PVP3_RDV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS (GFLV)	96-133							
PVP3_ROTPC	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	299-337	817-872						
PVP3_ROTSI	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	24-58	229-263	329-395	406-446	640-688			

PGENE	ALLMOTIF	All Viruses (no bacteriophages)								
ELEMENT	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP40_EBV	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-76	244-278	331-365	451-492	662-696			
PVP40_HSV11	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	433-467							
PVP40_HSVEB	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	206-257	599-633						
PVP40_ILTVT	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	180-245							
PVP40_SCMVC	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V 85	1-35	509-557						
PVP40_VZVD	CAPSID PROTEIN P40	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	457-498							
PVP40_NPVAC	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	167-246	486-522						
PVP41_ROTSI	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	122-166							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	484-518	528-630					
PVP4A_VACCC	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	237-518	531-646					
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	355-359	718-763	794-828	857-891				
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	262-296	355-359	718-763	794-828	857-891			
PVP4D_FOWPV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	355-389	719-764	795-829	858-892				
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	131-172	296-330						
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-37	125-163	249-283					
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	1-37	125-163	249-283					
PVP4_BTV10	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	1-37	125-163	249-283					
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	579-617	619-653						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	569-607	609-643						
PVP4_BTV3A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	569-607	609-643						
PVP4_NCDV	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	569-607	609-643						
PVP4_RDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	484-518	528-630						
PVP4_ROTD4	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS (RDV)	388-437	444-478	627-679					
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	1-35	112-146	338-379	484-518	528-653			
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	1-35	484-518	528-630					
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	1-35	112-146	338-379	484-518	528-653			
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	1-35	112-146	227-274	345-379	484-518	528-653		
PVP4_ROTHI	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	117-151	476-519						
PVP4_ROTHS	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	1-35	236-273	337-378	483-517	530-645			
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	1-35	112-146	237-274	338-379	484-518	531-646		
PVP4_ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	1-35	237-274	345-379	484-518	528-588			
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	1-35	337-378	483-517	527-652				
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	1-35	337-378	483-517	530-645				
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	1-35	237-274	338-379	484-518	531-645			
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	1-38	91-146	227-274					
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	1-35	236-273	337-378	483-517	530-644			
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70	1-35	237-273	344-378	483-517	527-652			
PVP4_ROTP3	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	1-35	237-273	344-378	483-517	527-652			
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	484-518	528-629					
PVP4_ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	6-40	137-161	241-278	293-334	580-614			
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	1-35	236-273	337-378	483-517	530-564	569-638		
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	1-35	112-146	237-274	484-518	528-629			
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	1-38	112-146	237-274	338-379	484-522	531-646		
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEN)	1-35	484-518	528-630					
PVP4_WTV	DE OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEN)	1-35	237-274	345-379	484-518	531-646			
PVP5_AHSV4	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	38-82	565-621						
PVP5_BRD	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC	7-58	113-229						
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	45-86	98-226						

PCGENE	ALLNIOTIS	All Viruses (no bacteriophages)								
ENTRYNAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	14-58	92-150	154-222	404-438				
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	14-58	92-150	154-222	404-445				
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	14-58	154-222	404-438					
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	14-58	92-143	148-222	404-438				
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-58	92-143	148-222	404-438				
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	14-58	92-222	404-438					
PVP5_RDV	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	24-58	92-126	163-233	291-325	399-433			
PVP5_WTV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS (RDV)	38-86	95-136	550-594					
PVP61_BTV10	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	434-503	547-581	751-798					
PVP61_MRDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	163-215							
PVP61_NPVAC	PROBABLE NONSTRUCTURAL 41.0 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (MRDV)	128-202							
PVP62_BTV10	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	29-96	351-386						
PVP64_NPVOP	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	67-88	159-207	214-251					
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	296-361	431-479						
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	289-364	443-477					
PVP6_BTV11	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GMS	206-281							
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	159-211							
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	159-211							
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	68-102	159-211						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	12-78	163-211						
PVP6_RDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	44-78	135-187						
PVP6_WTV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS (RDV)	150-191	296-344	360-401					
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	144-178	286-334	400-434					
PVP74_NPVAC	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	144-178	286-334						
PVP74_NPVCF	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	387-456							
PVP75_HSVSA	P74 PROTEIN	CHORISTONEURA FUMIFERANA NUCLEAR POLYHEDROSIS VIRU	385-453							
PVP79_NPVAC	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	50-99	163-211	931-984					
PVP7_BTV10	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	363-397	406-440					
PVP7_BTV11	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA). (SEROTYPE	184-228							
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	201-215							
PVP7_BTV1A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	184-228							
PVP7_BTV1S	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	184-235							
PVP7_BTV2A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	184-228							
PVP7_EHDV1	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	184-228							
PVP7_RDV	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	16-50	134-178						
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS (RDV)	47-95	172-255						
PVP80_NPVAC	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS (WTV)	47-84	193-243	458-493					
PVP87_NPVOP	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	7-51	99-142	156-204	221-298				
PVP8_BTV10	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	80-162	410-453						
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	54-102	185-219						
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	54-102	185-219						
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	54-102	185-219						
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	54-102	185-219						
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	54-102	185-219						
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	54-102	185-219						
PVP8_FOWPV	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	54-102	185-219						
PVP9_RDV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	193-245							
PVP9_WTV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS (RDV)	13-47	186-226						
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (WTV)	140-212							
PVPG_BYDV1	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	140-212							
PVPHE_NPVAC	PUTATIVE GENOME-LINKED PROTEIN PRECURSOR	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	25-59							
PVPHE_NPVOP	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	146-223							

PCGENE	ALLMOTIFS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PVPR_SIVSQ	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	131-201	206-265						
PVPU_HIVA2	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	78-115							
PVPU_HIVIA2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-38							
PVPU_HIVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HI	4-72							
PVPU_HIVIB2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE) (HIV	5-72							
PVPU_HIVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (H	4-59							
PVPU_HIVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV	4-72							
PVPU_HIVIC4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-40							
PVPU_HIVIEL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV	6-40							
PVPU_HIVIH2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HI	5-72							
PVPU_HIVIJ	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH) ISOLATE) (HIV	2-50							
PVPU_HIVIR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (H	4-59							
PVPU_HIVIMA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HI	5-50							
PVPU_HIVIND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HI	4-40							
PVPU_HIVIPV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HI	4-72							
PVPU_HIVIRH	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (	1-39							
PVPU_HIVIS1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE) (HI	4-59							
PVPU_HIVIZ2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	6-40							
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	21-78							
PVPX_HIV2D2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7) (I	42-85							
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-74	857-898						
PVS01_ROTS1	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	248-287							
PVS04_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-44							
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT.	69-144							
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	24-58	64-103						
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	9-43							
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-43							
PVS07_ROTBI	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN KN-4)	2-36	282-320						
PVS07_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	88-153	199-236						
PVS07_ROTP3	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	88-102	202-236						
PVS07_ROTS1	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	88-153	199-236						
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	2-70	75-119	160-226					
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NS2/VP9	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-46	144-212	217-255					
PVS09_ROTB4	NONSTRUCTURAL PROTEIN NCVP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-54	282-320						
PVS09_ROTB5	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-43	282-320						
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	2-54	282-320						
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	2-54	282-320						
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	2-54	282-320						
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK3)	2-54	282-320						
PVS09_ROTBN	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN NCDV)	2-54	282-320						
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	2-43	282-320						
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-54	282-320						
PVS09_ROTC7	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	285-326							
PVS09_ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	282-320							
PVS09_ROTGA	GLYCOPROTEIN VP7	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT.	43-77							
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	45-79							
PVS09_ROTH4	GLYCOPROTEIN VP7 PRECURSOR	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-43	282-320						
PVS09_ROTH9	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN RK9)	282-320							
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	282-320							
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN D37)	2-43	282-320						
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	282-320							
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	282-320							
PVS09_ROTHL	GLYCOPROTEIN VP7									

PGENE	ALLNOTIS	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVS09_ROTIDM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	1-35	282-320						
PVS09_ROTIIO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-43	282-320						
PVS09_ROTIIP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M0 AND STRAIN D)	2-43	282-320						
PVS09_ROTIIR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	282-320							
PVS09_ROTIIS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	282-320							
PVS09_ROTIIT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	282-320							
PVS09_ROTIIV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	18-56	208-242	282-320					
PVS09_ROTIIW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	18-56	208-242	282-320					
PVS09_ROTP2	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-43	282-320						
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	282-320							
PVS09_ROTP4	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	282-320							
PVS09_ROTP5	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN OSU)	2-56	208-242	282-320					
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	282-320							
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	282-320							
PVS09_ROTPK	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	18-56	208-242	282-320					
PVS09_ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN K)	18-56	282-320						
PVS09_ROTPY	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BNI-1)	18-56	208-242	282-320					
PVS09_ROTRH	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN YM)	1-35	282-320						
PVS09_ROTS1	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	282-320							
PVS10_ROTBN	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	282-320							
PVS10_ROTBS	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN NCDV)	73-161							
PVS10_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	17-58							
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN UK)	73-161							
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A28)	73-162							
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	73-162							
PVS10_ROTHC	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6)	73-162							
PVS10_ROTHV	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	121-158							
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	73-126							
PVS11_ROTGA	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	73-162							
PVS11_ROTGI	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTA	24-65	96-130						
PVS11_ROTH5	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	9-68							
PVS11_ROTH6	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	100-145							
PVS11_ROTHB	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	107-144							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 4) / STRAIN B37)	107-144							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	111-145							
PVS11_ROTS1	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145							
PVS48_TBRVC	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-145							
PVSII_MUMP1	SATELLITE RNA 48 KD PROTEIN	TOMATO BLACK RING VIRUS (STRAIN C) (TBRV)	217-265							
PVSII_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL	9-46							
PVSII_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2), AND (STRAIN EDINGB	13-47							
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	13-47							
PVSII_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	13-51							
PVSII_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	13-52							
PVSII_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46							
PVSII_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46							
PVSII_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-51							
PVSII_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URISTOL 1)	13-55							
PVSH_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	17-51							
PVSII_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAHASHI)	13-47							
PVSII_REOVD	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	13-47							
PVSII_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	8-122	127-175	222-259					
PVSII_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DSIONES)	1-178							

PCGENE	ALLANOTIS	All Viruses (no bacteriophages)	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4	AREA5	AREA5
E11E_CANE	PROTEIN	VIRUS	1-107	112-198								
PVS12_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	330-384									
PVS12_REOVL	SIGMA 2 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	330-384									
PVS15_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	85-119									
PVS15_REJVJ	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	7-45									
PVS15_REJVU	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 2 / STRAIN DYSONES)	318-352									
PVS12_HEVAE	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA) (HEV)	317-351									
PVS12_HEVAIY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	318-352									
PVS12_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	318-352									
PVS12_HEVRM	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	318-352									
PVJ1A_CAPVI	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RHESUS)(HEV)	186-220									
PVT4_CAPVK	PROTEIN T1A	CAPRIPOXVIRUS (STRAIN INS-1)	120-158									
PVT4_CAPVK	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN INS-1)	86-120									
PVIER_EBV	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	86-120									
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	235-290	595-639								
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451	617-658								
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	466-502									
PVTER_HSVEB	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	11-45									
PVTER_HSV1I	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	98-136	698-744								
PVTER_HSV5A	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	226-267									
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	588-622									
PVV_PIAIA	PROBABLE DNA PACKAGING PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	4-38									
PVY1_SENDS	V PROTEIN	SENDAI VIRUS (STRAIN 6/4)	104-138									
PY101_SSV1	Y1 PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-80									
PY108_SSV1	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-45									
PY110_SSV1	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	55-89									
PY119_SSV1	HYPOTHETICAL 11.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	10-46									
PY11K_TYDVA	HYPOTHETICAL 11.9 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	93-87									
PY12K_FCVC6	HYPOTHETICAL 11.2 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI-68) (FCV)	4-38									
PY12K_FCVF9	HYPOTHETICAL 12.1 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	4-38									
PY12K_RJDV	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEI	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV)	11-50									
PY12K_RJDV3	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEI	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351) (RHDV)	13-50									
PY13K_CLVK	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 144)	40-77									
PY13K_CLVN	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	43-77									
PY13K_MYVOP	HYPOTHETICAL 14.5 KD PROTEIN IN 19 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	16-67									
PY13K_SSV1	HYPOTHETICAL 11.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	2-36	62-96								
PY14K_SSV1	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	3-39									
PY160_ADE02	HYPOTHETICAL PROTEIN C-160	HUMAN ADENOVIRUS TYPE 2	119-166									
PY16K_SSV1	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-35	77-111								
PY17K_SSV1	HYPOTHETICAL 17.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-45	119-153								
PY18K_SSV1	HYPOTHETICAL 18.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	102-136									
PY20K_SSV1	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-107									
PY23K_SSV1	HYPOTHETICAL 23.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	127-180									
PY3_SOCHY	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	117-154									
PY31K_SSV1	HYPOTHETICAL 31.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	7-97	100-141								
PY31K_SSV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	230-278									
PY31K_NPVAC	HYPOTHETICAL 31.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	133-241									
PY3_SOCHY	HYPOTHETICAL 31.7 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	115-149									
PY3K9_SSV1	HYPOTHETICAL PROTEIN 3	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-51									
PY3_SOCHY	HYPOTHETICAL 5.9 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	36-94									
PY5K_SSV1	HYPOTHETICAL PROTEIN 7	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-135	503-537	546-587	658-700						
PY8_SOCHY	HYPOTHETICAL 8.5 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	46-83									
PYB01_FOWPX	HYPOTHETICAL PROTEIN 8	FOWLPOX VIRUS (ISOLATE HP-438MUNICH1)	74-115	184-221								
PYB04_FOWPX	HYPOTHETICAL BAMII-ORF1 PROTEIN											

FEATURE	ALL MOTIFS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PY005_FOWPM	HYPOTHETICAL BAMHI ORF4 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	29-70							
PY006_FOWPM	HYPOTHETICAL BAMHI-ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	1-37	61-95						
PY007_FOWPM	HYPOTHETICAL BAMHI-ORF6 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	115-149							
PY010_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	344-378							
PY012_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-251							
PY013_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	4-47	117-153						
PY013_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	122-163							
PYRL2_EBV	HYPOTHETICAL BDLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	458-506							
PYDHH_HSV87	HYPOTHETICAL 24.1 KD PROTEIN IN DIFR 3 REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	147-188							
PYF10_FOWPI	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	160-204							
PYGA1_HSV3B	HYPOTHETICAL 23.6 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1) (MDHV)	176-211							
PYGA1_HSV3M	HYPOTHETICAL 23.6 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN MDS) (MDHV)	176-211							
PYH22_VACCV	HYPOTHETICAL 23.6 KD PROTEIN IN GLYCOPROTEI	VACCINIA VIRUS (STRAIN WR)	34-78	95-139						
PYHRJ_VACCV	HYPOTHETICAL 21.7 KD HINDIII-C PROTEIN	VACCINIA VIRUS (STRAIN WR)	24-58	181-222						
PYKR4_EBV	HYPOTHETICAL HOST RANGE 27.4 KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	16-58							
PYL15_ADE41	HYPOTHETICAL BKRF4 PROTEIN	HUMAN ADENOVIRUS TYPE 41	39-81							
PYLR2_EBV	HYPOTHETICAL 12.4 KD PROTEIN IN 33 KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	64-125							
PYOR1_COYMV	HYPOTHETICAL BLRF2 PROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	94-147							
PYOR2_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	33-77							
PYOR3_LELV	HYPOTHETICAL 15 KD PROTEIN	LELYSTAD VIRUS (LV)	100-134							
PYOR3_TTV1	HYPOTHETICAL 28.4 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	14-54							
PYOR3_ADEG1	HYPOTHETICAL 6.9 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRI	70-127							
PYORA_TTV1	HYPOTHETICAL 31.5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	21-67							
PYORD_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	6-51	89-130						
PYORE_TTV1	HYPOTHETICAL 15.4 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	78-122							
PYORL_TTV1	HYPOTHETICAL 15.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	1-45							
PYORQ_TTV1	HYPOTHETICAL 26.8 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	1-43							
PYORT_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	4-38	281-315						
PYORW_TTV1	HYPOTHETICAL 38.7 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	4-89							
PYP13_RTBV	HYPOTHETICAL 12.1 KD PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	33-72							
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTI	33-72							
PYP24_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	51-101	106-157						
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	51-101	106-157						
PYP46_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	49-111	197-231						
PYP46_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	49-111	197-231						
PYP61_NPVAC	HYPOTHETICAL P46 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	32-73							
PYP7A_TNVA	HYPOTHETICAL PROTEIN IN P6.5 5'REGION	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	1-45							
PYPOH_NPVAC	HYPOTHETICAL P7A PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	116-153							
PYPOL_IPNV1	HYPOTHETICAL 23.6 KD PROTEIN IN POLYHEDRIN 5	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	25-66							
PYQ1_AMEPV	HYPOTHETICAL 17.3 KD PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	9-61							
PYQ3_AMEPV	HYPOTHETICAL 7.6 KD PROTEIN IN TK 5'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	1-57	62-96	149-183					
PYRF2_HSV6G	HYPOTHETICAL PROTEIN IN TK 5'REGION	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	193-264							
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	134-175							
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	252-286	404-442						
PYRP2_IRV6	HYPOTHETICAL PROTEIN RF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYI	1-45							
PYRR1_EBV	REPETITIVE PROTEIN ORF2	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	96-130							
PYSR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	98-177							
PYTR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	390-424							
PYUB2_NPVOP	HYPOTHETICAL BTRF1 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	25-69	170-204						
PYVAC_VACCC	HYPOTHETICAL 24.0 KD PROTEIN IN UBIQUITIN 3'R	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-63							
PYVAG_VACCC	HYPOTHETICAL 14.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-37							
PYVAH_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	78-112							
PYVAN_VACCC	HYPOTHETICAL 14.5 KD PROTEIN									

GENE	ALLNOTES	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
H_KSAIE	PROTEIN	VIRUS	23-57							
YVBH_VACCC	HYPOTHETICAL 7 9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-39							
YVCC_VACCC	HYPOTHETICAL 7 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-48							
YVDB_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-80							
YVDB_VACCV	HYPOTHETICAL 8 5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-80							
YVDC_VACCV	HYPOTHETICAL 8 5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	7-41							
YVDB_VACCC	HYPOTHETICAL 7 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-51							
YVDA_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	9-51							
	HYPOTHETICAL 8 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)								

TABLE VI

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	187x178x4	All Viruses (no bacteriophages)									
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
P194K_TRVSY	POT 194 KD PRO	TOBACCO RATTLE VIRUS (STRAIN SYM)	387-414	1087-1114	1142-1169						
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVDJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVIT	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVMJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVSI	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133							
PAANT_HDVSJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133							
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	72-106								
PATII_VACCV	94 KD A-TYPE INCLUSION PRO	VACCINIA VIRUS (STRAIN WR)	14-56	67-94	424-472	570-625					
PATII_VARV	81 KD A-TYPE INCLUSION PRO	VARIOLA VIRUS	67-94	425-504	571-605						
PATI2_HSV11	ALPHA TRANS-IND FACTOR 78 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	308-335								
PATI2_HSV1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	308-335								
PATI2_HSVEB	ALPHA TRANS-IND FACTOR 82 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	294-321								
PATIN_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	255-289								
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-56	67-94	426-498	572-620	837-841	934-990	1234-1261		
PBZLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220								
PCAIH_VACCC	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	84-111	117-144							
PCAIH_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	84-111	117-144							
PCAIH_VARV	CELL SURFACE-BINDING PROTEIN	VARIOLA VIRUS	84-111	117-144							
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	312-339								
PCGH2_HSVSA	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	127-154								
PCOA1_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	159-186								
PCOA3_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	160-187								
PCOA3_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	49-76								
PCOA3_POVJC	COAT PROTEIN VP2	POLYOMAVIRUS JC	37-64								
PCOA3_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	170-204								
PCOA3_POVMK	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN KILHAM)	22-49								
PCOA3_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	178-205								
PCOAJ_AAV2	PROBABLE COAT PROTEIN 3	ADENO-ASSOCIATED VIRUS 2	120-147								
PCOAJ_TTV1	COAT PROTEIN TP3	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-30								
PCOAT_ADVG	COAT PROTEIN VP1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	194-221								
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	96-123								
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	63-90	193-220	461-488						
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DM)	64-91	194-221							
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	63-90	193-220							
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	63-90	192-219	461-488						
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	64-91	194-221							
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	16-43								
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	41-86								
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-362								
PCOAT_CSMV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	62-89								
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	170-200								
PCOAT_FCVC6	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	566-600								
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	516-543	566-600							
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	519-546	569-603							
PCOAT_FMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	220-247	358-385							
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	32-700	246-273							
PCOAT_MISV	COAT PROTEIN	MISCANTHUS STREAK VIRUS	139-166								
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	106-133								
PCOAT_PAVHB	PROBABLE COAT PROTEIN VP1	HUMAN PARVOVIRUS B19	524-551	569-596							
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS (ISOLATE ATCC PV275)	46-73								
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-162								
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	21-48								
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	23-50								
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN BS-3)	3-30	41-68							
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	97-124								

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	232-259								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	104-131								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	104-131								
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	78-132								
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAIKLEMENSE)	104-131								
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	104-131								
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O and KOKUBU)	104-131								
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	104-131								
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	104-131								
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	90-117								
PCOAT_TRVPS	COAT PROTEIN	TOBACCO RATTLE VIRUS (STRAINS PSG and PLB)	118-145								
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	10-37								
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-68								
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	41-68								
PDNB2_ADE07	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 7	46-73								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	437-464								
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	333-368	512-539							
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-618								
PDNBI_POVJC	DNA-BINDING PROTEIN	POLYOMAVIRUS JC	2-29								
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	435-462	532-559							
PDNLI_VACCC	DNA LIGASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-131	172-199	358-385						
PDNLI_VACCV	DNA LIGASE	VACCINIA VIRUS (STRAIN WR)	104-131	172-199	358-385						
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	104-131	172-199	358-385						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	403-431								
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	23-64	202-240							
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	338-365								
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	338-365								
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	370-416	621-655	772-799					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-780								
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	5-39								
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	5-39	304-331							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39								
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	456-483								
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	443-470								
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	328-366	710-737							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	625-652								
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	598-643								
PDPOL_NPVLD	DNA POLYMERASE	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	357-384								
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	770-797								
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	770-797								
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	769-796								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-242	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	289-330							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	290-331							
PDTXH_CORBE	DIPHTH TOXIN HOMOLOG CRM228 PREC	CORYNEPHAGE BETA	516-533								
PDTX_CORBE	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE BETA	523-560								
PDTX_COROM	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE OMEGA	516-533								
PDUT_HSVE4	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PDUT_HSVSA	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	179-213								
PE1BL_ADE07	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 7	126-153								
PE1BL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	136-163								
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	3-30								

PCGENE	ID[1:11]Std	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	122-177	------	------	------	------	------	------	------
PE1B5_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	2-29							
PE1I4_ADE02	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	21-48							
PE1I4_ADE07	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	5-33	76-100						
PE1I9_ADE03	EARLY E1 B 19 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	76-107							
PE1I9_ADE05	EARLY E1 B 19 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 15	125-161							
PE1I9_ADE35	EARLY E1 B 19 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	38-66							
PE1GL_ADEM1	EARLY E1 B 19 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	45-82							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN [illegible])	307-341	470-497						
PEFT1_VARV	EARLY TRANSFACTOR 70 KD SUBUNIT	VARIOLA VIRUS	420-468							
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	6-33	428-474						
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	395-452							
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	17-44	544-603	631-695					
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-44	573-632	660-724					
PENV_BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	104-377							
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	104-377							
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	104-377							
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE YDM)	104-377							
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB215)	111-377							
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB359)	104-377							
PENV_BLVJ1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	104-377							
PENV_CAEVG	ENV POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	163-192							
PENV_EIAV1	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P12-1)	668-712							
PENV_EIAV2	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P12-2)	668-695							
PENV_EIAV3	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P12-3)	668-712							
PENV_EIAV5	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P12-5)	669-696							
PENV_EIAV9	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1169)	668-712							
PENV_EIAVC	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	668-712							
PENV_EIAVW	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	668-712							
PENV_EIAVY	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	668-712							
PENV_FENV1	ENV POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	33-60	517-544						
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	650-680	722-749						
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	639-668	720-747						
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-679	721-748						
PENV_FLVCG	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-4)	509-538							
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519							
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510-539							
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516							
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	14-41	318-355	866-891					
PENV_FSVGA	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	510-539							
PENV_FSVGB	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GA)	490-519							
PENV_FSVSM	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN SM)	491-522							
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203	523-564						
PENV_HTL1A	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	342-376							
PENV_HTL1C	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	342-376							
PENV_HTL1M	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	342-376							
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	338-370							
PENV_HTLV3	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ARV/ISF3 ISOLATE)	344-392	630-682	790-825					
PENV_HVIAZ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BIII10 ISOLATE)	545-594	611-663	791-818					
PENV_HVIB1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OIII8 ISOLATE)	540-589	626-678	786-813					
PENV_HVIB8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	287-894	338-365	562-590	626-679	787-815			
PENV_HVIBN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	550-599	616-668	796-823					
PENV_HVIBR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	397-424	557-606	643-695	803-835				
PENV_HVIC4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	335-396	386-413	543-591	628-680				
PENV_HVIEL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	545-594	611-663	791-818					
PENV_HVIH2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	545-594	611-663	791-818					
PENV_HVIH3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HI3 ISOLATE)	350-377	558-605	643-694	802-829				
PENV_HVIID	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	336-363	623-673	783-811					
PENV_HVIIR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIRF ISOLATE)	336-363	623-673	783-811					

PCGENE	107a178a4	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PENV_HV1KB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	274-301	555-596	637-677	776-824					
PENV_HV1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	547-595	633-707	794-826						
PENV_HV1MF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	543-592	629-681	789-816						
PENV_HV1MN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	543-370	567-595	632-684	791-819					
PENV_HV1NS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	326-360								
PENV_HV1ND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	536-583	621-673	783-813					
PENV_HV1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	544-593	630-704	789-820						
PENV_HV1PV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	545-594	631-683	791-818						
PENV_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	280-307	551-378	554-602	640-692	800-832				
PENV_HV1SI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	536-585	622-674	782-809					
PENV_HV1SJ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	541-589	627-679	787-815						
PENV_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	543-593	631-683						
PENV_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	338-365	545-593	631-683	791-818					
PENV_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	334-361	536-584	622-674	782-809					
PENV_HV1Z2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	235-296	542-591	628-680	790-820					
PENV_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-292								
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-297	545-593	630-682	792-822					
PENV_HV1Z8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	266-307	573-601	634-678	797-828					
PENV_HV1ZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	545-594	627-666	791-823						
PENV_HV2BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	532-591	621-648	653-697					
PENV_HV2CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	534-593	623-650	655-699						
PENV_HV2DI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	61-88	523-550	535-582	644-688					
PENV_HV2GI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	60-87	524-551	536-583	613-640	645-693				
PENV_HV2NZ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	61-88	524-551	536-583	613-640	662-689				
PENV_HV2RO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	58-85	533-592	622-698						
PENV_HV2S2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24 IC#2)	442-476	527-554	559-586	648-682					
PENV_HV2SB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY)	557-584	614-673							
PENV_HV2ST	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	559-586	648-692					
PENV_MCFF	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-512								
PENV_MCFF3	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-3)	488-515								
PENV_MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	517-544								
PENV_MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	510-539								
PENV_MLVFS	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	523-553								
PENV_MLVFF	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	523-553								
PENV_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	523-553								
PENV_MLVHO	ENV POLYPROTEIN	HOMULV MURINE LEUKEMIA VIRUS	510-540								
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
PENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	502-543								
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	458-485	562-589							
PENV_MMTVG	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	458-485	562-589							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	422-470								
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	57-84								
PENV_OMVVS	ENV POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	42-69	196-223	780-807						
PENV_RMCFV	ENV POLYPROTEIN	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	487-517								
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	14-41	866-901							
PENV_SFV1L	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3)	18-45	319-357	673-700	863-898					
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	269-310	561-588	592-619	652-679	697-724				
PENV_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	270-301	566-593	597-624	658-685	703-730				
PENV_SIVAJ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	257-291	336-372	548-603	634-708					
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	1-30	268-298	590-617	651-678					
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	253-289	336-366	526-584	627-654				
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	8-35	158-185	589-650	784-816					
PENV_SIVMI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	120-150	550-609	671-715						
PENV_SIVMQ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	156-215	277-289							
PENV_SIVMX	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	553-608								

PCGENE	1976/1986	All Viruses (no bacteriophage)	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
		VIRUS	349-408								
ENV_RAMSE	PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	281-308	553-612	641-669	691-718					
PENV_SIVMA	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PJ365/4U14 ISOLATE)	286-313	554-595	646-722						
PENV_SIVSA	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE)	400-463								
PENV_SIVSP	ENV POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	409-471								
PENV_SMRVH	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	22-82	773-800							
PENV_SRV1	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-82	780-807							
PENV_VILV	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	22-82	781-809							
PENV_VILV1	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	190-224								
PENV_VILV2	ENV POLYPROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	306-340	469-496	550-587						
PETF1_FOWP1	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	303-341	470-497							
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	303-341	470-497							
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	66-97	174-210	102-132						
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-97	174-210	102-132						
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82	VARIOLA VIRUS	109-139								
PETF2_VAAV	EARLY TRANSCRIPTION FACTOR 82	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	179-237								
PEXON_VZVD	ALKALINE EXONUCLEASE	HUMAN ADENOVIRUS TYPE 40	178-216								
PFIB1_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	108-135								
PFIB1_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 2	324-351	446-473							
PFIB1_ADE02	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	339-366	461-488							
PFIB1_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	118-145	164-191							
PFIB1_ADE41	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	275-305	325-352							
PFIB1_ADEB3	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	138-169								
PFIB1_ADEM1	FIBER PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	116-147								
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	AVIAN RETROVIRUS MK24	162-193								
PFOS_AVIXK	P55-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	270-307								
PFOS_MSVFB	P55-V-FOS TRANSFORMING PROTEIN	AVIAN SPLEEN NECROSIS VIRUS	144-171								
PGAG_AVISN	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	621-648								
PGAG_EIAVY	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	396-443	447-474							
PGAG_FOAMY	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	91-118								
PGAG_GALV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV/JSF2 ISOLATE)	91-118								
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ITI) ISOLATE)	87-118								
PGAG_HV1J1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	88-115								
PGAG_HV1MN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	88-115								
PGAG_HV2N2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
PGAG_HV2ST	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	230-297								
PGAG_DHA	RETROVIRUS-RELATED GAG POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	33-60	69-103	232-259						
PGAG_DNA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	96-130								
PGAG_DNAE	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	84-151	136-187							
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	84-116								
PGAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	84-151	136-187							
PGAG_MMTVO	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	222-260								
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	497-531	624-651							
PGAG_SCYLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	473-507								
PGAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRJ-1)	88-115								
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (KAW ISOLATE)	88-115								
PGAG_SIVMK	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115								
PGAG_SIVMS	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PJ365/M14 ISOLATE)	88-115								
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE)	397-441								
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	223-261								
PGAG_SMSAV	GAG POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	116-211	321-348							
PGAG_SRV1	GAG POLYPROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	418-449								
PHEL1_HSVEB	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	690-717	701-728							
PHEL1_HSVSA	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	268-342								
PHEL1_VZVD	PROBABLE HELICASE	BOVINE CORONAVIRUS (STRAIN F15)	308-342								
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	308-342								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)									
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR										

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	208-242								
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	208-242								
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	387-453								
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	24-51	371-437							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	381-451								
PHEMA_IACAO	HEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	9-36								
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	381-451								
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-58	382-441	494-528						
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	396-426								
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/83)	396-426								
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	119-146	384-443							
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	381-451								
PHEMA_IADA2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	423-453	499-543							
PHEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/78/76)	387-453								
PHEMA_IADA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/15/76)	29-56	418-478							
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	381-451								
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-55	402-453	506-533						
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	371-437								
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	371-437								
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	371-437								
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	371-437								
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	371-437								
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/85)	371-437								
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	371-437								
PHEMA_IADIR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/83)	413-445								
PHEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76)	21-58								
PHEMA_IADM3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	387-453								
PHEMA_IADMA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	31-58								
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-55								
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	381-451								
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-55								
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	387-453								
PHEMA_IAEN6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/878/69)	24-51								
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77)	40-67	387-453							
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	177-221	384-442							
PHEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	381-451								
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	505-532								
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	504-531								
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	386-452								
PHEMA_IAHAR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HARBIN/1/88)	29-56								
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	29-56	194-221	388-457						
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/77)	29-56	194-221	388-457						
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	386-452								
PHEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	386-452								
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	386-452								
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	29-56	194-221	388-457						
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	29-56	194-221	388-457						
PHEMA_IAHMI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	386-452								
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	386-452								
PHEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-56	194-221	388-457						
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	29-56	194-221	388-457						
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	386-452								
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	386-452								
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-56	194-221	388-457						
PHEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1137/72	29-56	194-221	388-457						

PCGENE	107n170d	(All Viruses (no bacteriophage))	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	VIRUS							
PHEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	386-452						
PHEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	386-455						
PHEMA_IAHTU	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1963)	386-452						
PHEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	196-223						
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	39-56	425-478					
PHEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/57)	39-56	425-478					
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47(H2N2))	380-450						
PHEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	385-455						
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/76/83)	387-453						
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	40-67	387-453					
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	40-67	387-453					
PHEMA_IAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	40-67	387-453					
PHEMA_IAME3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	24-51	371-437					
PHEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	11-38	382-441					
PHEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	387-453						
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/ANANH/2178/84)	505-534						
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	39-56	425-478					
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/70)	24-51						
PHEMA_IAQUT	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	381-451						
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/1980)	381-451						
PHEMA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	28-56	160-187	506-547				
PHEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	119-146	384-441					
PHEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/515/85)	39-56						
PHEMA_IATAJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	415-445						
PHEMA_IATK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ARELAND/1378/81)	381-451						
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	501-534						
PHEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	424-434	493-539					
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	32-62	194-221	381-422				
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	419-449	500-536					
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	31-55						
PHEMA_IATKX	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	40-67	387-453					
PHEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	39-56	425-478					
PHEMA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	41-68	388-454					
PHEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	424-477						
PHEMA_IAWI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	39-56						
PHEMA_IAWS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/67/05)	40-67	387-453					
PHEMA_IAX0A	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	371-437						
PHEMA_IAX0O	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	371-437						
PHEMA_IAX0U	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1362/82)	418-478	506-547					
PHEMA_IAX0Z	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	418-478	506-547					
PHEMA_IAX1N	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	418-478	506-547					
PHEMA_IAX1U	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UCKEL/1/84)	387-453						
PHEMA_IAX1X	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	400-431	439-483					
PHEMA_IAX80	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/43)	390-421	428-473					
PHEMA_IAX8N	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	390-429	437-481					
PHEMA_IAX8O	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	390-418	429-473					
PHEMA_IAX8X	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	390-430	438-482					
PHEMA_IAX8Z	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/1/59)	389-420	428-472					
PHEMA_IAX9D	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	390-424	433-476					
PHEMA_IAX9E	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	390-429	437-481					
PHEMA_IAX9O	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	390-429	437-481					
PHEMA_IAX9S	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	391-422	438-474					
PHEMA_IAX9U	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/85)	391-424	433-476					
PHEMA_IAY1	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	400-431	439-483					
PHEMA_IBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ALICHURI/78)	495-531						
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	483-519						
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	483-519						
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/81)	482-518						
PHEMA_INCHY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	496-532						
PHEMA_INCH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KANAGAWA/1/76)							

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMA_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	482-558								
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	482-558								
PHEMA_INCNA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/NARA/82)	482-558								
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	483-559								
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	483-559								
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	483-559								
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	483-559								
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	483-559								
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	64-91								
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	64-91								
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	64-91								
PHEMA_NDVH	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	64-91								
PHEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	64-91								
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	64-91								
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	64-91								
PHEMA_NDVTG	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B/48)	64-91								
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	64-91								
PHEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-66	46-73							
PHEMA_PI1HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	79-110	366-393							
PHEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PHEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/124854/74)	27-61								
PHEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	27-76								
PHEMA_PI3HU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	23-70								
PHEMA_PI3HV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/83)	27-61								
PHEMA_PI3HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	27-61								
PHEMA_PI3HX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/73)	27-61								
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POXVIRUS	186-214	256-283							
PHEMA_SEND5	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	79-106								
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	79-106								
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	79-106								
PHEMA_SENDI	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	79-106								
PHEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	79-106								
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	22-52	394-421							
PHEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	119-146	175-202	216-243						
PHEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	109-146	175-202	216-243						
PHEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	119-146	175-202	216-243						
PHEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	109-146	175-202	215-242						
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	111-148	177-211	214-244						
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	100-134								
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	100-134								
PHEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPES 3 and 7	97-127								
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	146-173	359-386	433-460						
PHEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	348-375								
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	396-423								
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	305-338								
PHHB_COWPX	HEMORRHAGE-INDUCING 38 KD PROTEIN	COWPOX VIRUS	28-55								
PHRG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	462-489								
PI196_ASFB7	LATE PROTEIN I196L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	12-43								
PI226_ASFB7	LATE PROTEIN I226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	113-147								
PIBMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	17-44								
PIBMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	17-44								
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	383-410								
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	6-33								
PIBMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	372-407								
PIBMP_SOCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	3-48	331-358							
PIC18_HCMVA	PROB PROC & TRANSPORT PRO UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324								

PCGENE	10?s1?b4	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2	AREA1	AREA2
FILE NAME	PROTEIN	VIRUS	58-85	482-522							
PKC18_HSV5A	PROBABLE PROC & TRANSPORT PRO	HERPES VIRUS SAIMIRI (STRAIN 11)	641-681								
PKC18_MCMV5	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	248-295								
PIE4I_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40-87								
PIE4I_HSV11	IMMEDIATE-EARLY PROTEIN IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	48-78								
PIE4J_HSV5A	IMMEDIATE-EARLY PROTEIN	HERPES VIRUS SAIMIRI (STRAIN 11)	22-49								
PIR05_MCMVA	HYPOTHETICAL PROTEIN DL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	24-162								
PIR13_MCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-62								
PIR13_MCMVA	HYPOTHETICAL PROTEIN (UL11)	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	106-150								
PKFE5_FSVGA	TYROSINE KINASE TRANSF PROTEIN FES	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	318-352								
PKFGA_FSVGA	TYROSINE KINASE TRANSF PROTEIN FGA	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	327-363								
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSF PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	135-243	249-297							
PKFPS_FUSSV	TYROSINE KINASE TRANSF PROTEIN FPS	FUJINAMI SARCOMA VIRUS	47-84								
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	41-68								
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1)	41-68								
PKITH_HSV5A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	340-386								
PKITH_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN TISSONE Vaal)	334-381								
PKLY4_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	491-518								
PKLY8I_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	141-168								
PKLY8I_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	141-168								
PKLY8J_VACCC	POSSIBLE PROTEIN KINASE B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-174								
PKLY8J_VACCV	POSSIBLE PROTEIN KINASE B13	VACCINIA VIRUS (STRAIN WR)	147-174								
PKLY9I_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-74								
PKLY9I_VAIAV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	47-74								
PKLY9S_AVISU	ROS TYROSINE KINASE TRANSF PROTEIN	AVIAN SARCOMA VIRUS (STRAIN URJ)	111-138								
PKLY9_AVSBJ	TYROSINE KINASE TRANSF PROTEIN RYK	AVIAN RETROVIRUS RPL30	22-49								
PKYES_AVISY	TYROSINE KINASE TRANSF PROTEIN YES	AVIAN SARCOMA VIRUS (STRAIN Y73)	199-233								
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	386-413								
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	386-413								
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-231								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	206-233								
PLM01_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	148-175								
PLM01_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BAAR VIRUS (STRAIN CAO)	148-175								
PLM01_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BAAR VIRUS (STRAIN RAJI)	148-175								
PLM01_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	294-321								
PMCBL_SFVSA	MONA CAPPING ENZYME, LARGE SUBUNI	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-196	289-316	497-524	622-656					
PMCBL_VACCC	MONA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-112	291-318	630-657						
PMCBL_VACCV	MONA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN WR)	85-112	291-318	630-657						
PMCBL_VAIAV	MONA CAPPING ENZYME, LARGE SUBUNI	VARIOLA VIRUS	279-313								
PMCBL_ASFB7	MONA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	178-197								
PMOVP_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN W)	178-197								
PMOVP_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	53-90								
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	48-80								
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L11A)	48-80								
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L11)	143-170	229-256							
PMTC1_CHVN1	MODIFICATION METHYLASE CVIBI	CHLORELLA VIRUS NC-1A	4-31	130-172							
PMTC1_CHVP1	MODIFICATION METHYLASE CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	232-266	373-402							
PMTC_AVD43	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CAII	233-267	376-403							
PMTC_AVDMC	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	233-267	376-403							
PMTC_AVDMD	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MDI	239-268	377-404							
PMTC_AVDME	MTC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	237-261	370-397							
PMTC_AVOK	MTC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	193-420								
PMTC_FLV	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-420								
PMTC_FLVTT	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	48-76	129-156							
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	85-112								
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	96-123								
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	48-75	169-220							
PNCAP_BUNTV	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS									

PCGENE	107a17804	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C68031)	223-271								
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	140-174								
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653514)	40-74								
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	191-227								
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	191-227								
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH ISOLAT	191-227								
PNCAP_CVPRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	191-227								
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	238-265								
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	182-209								
PNCAP_HAZVJ	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC280)	6-33	256-283							
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31	74-108	112-141						
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PNCAP_LASSG	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	64-99	147-174							
PNCAP_LASSJ	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	64-99	467-504							
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	64-97								
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	41-68	192-219							
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	64-99								
PNCAP_PI1HC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	377-404	455-482							
PNCAP_PI1HW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	377-404	444-488							
PNCAP_PI3H4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH J47885	376-403								
PNCAP_PTPV	NUCLEOCAPSID PROTEIN	PUNTA TORO PHLEBOVIRUS	3-30								
PNCAP_PUUAH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	2-29								
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	2-29								
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-120								
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-167								
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	133-167								
PNCAP_RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	133-167								
PNCAP_SENDS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	363-404								
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	363-404								
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	363-404								
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	4-31								
PNCAP_SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	507-534								
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	50-77								
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	6-33								
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	68-102								
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	284-314								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARAH)	149-176	284-314							
PNCAP_VSVIG	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW	56-83								
PNCAP_VSVJO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN	67-94	338-365							
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	56-83								
PNEF_HV1EL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119								
PNEF_HV1ND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-119								
PNEF_HV1Z6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRJ-1)	96-137								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	47-81								
PNRAM_IACA0	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82	33-64								
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	16-43	50-91							
PNRAM_IADA1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	51-81								
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	21-48								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74)	197-224	386-413							
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	46-76	364-400						
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	50-81								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	50-81								
PNRAM_IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71H-A/BELLAMY/42N)	16-43	50-81							
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	16-43	50-81							
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	16-43								

PCGENE	10:a1:t1:c4	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
TILE NAME	PROTEIN	VIRUS	49-88								
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/UDDY/TURNSTONE/NEW JERSEY/80/85)	49-88								
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/GOC/75)	49-88								
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	49-88								
PNRAM_IAWNH	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/1/84)	16-43								
PNRAM_IAWSN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	16-43								
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-35								
PNRAM_INBLE	NEURAMINIDASE	BOMBYX DENSONUCLEOSIS VIRUS	203-310								
PNS1_SDEV	PROB NONSTRUC PRO PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	42-89								
PNS3_SDEV	PROB NONSTRUC PRO PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS (STRAIN NL-07)	95-122								
PNS5_DSVN	NON-STRUCTURAL PROTEIN	DAPATIENS NECROTIC SPOT VIRUS (BRAZILIAN ISOLATE: CPNIIIAIR-01)	5-32	412-462							
PNS5_TSWV	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE: CPNIIIAIR-01)	5-32								
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LJ)	28-69								
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	122-166	367-374	524-551						
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	65-92	394-421	514-587						
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	65-92	394-421	514-587						
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	65-92	394-421	514-587						
PNTP1_VAIV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS	300-327	420-447	455-493						
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	81-108	189-216	688-715	785-812					
PP100_HSVAU	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	88-115								
PPAF1_VACCC	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PPAF1_VACCV	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	88-115								
PPAF1_VARV	POLY(A) POL CATALYTIC SUBUNIT	VARIOLA VIRUS	118-145								
PPAF2_CAPVK	POLY(A) POL REG SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	17-54								
PPAF2_FOWPV	POLY(A) POL REG SUBUNIT	FOWLPOX VIRUS	61-101								
PPE13_NPVAC	12.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	61-95								
PPE13_NPVOP	11.5 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	204-248								
PPE38_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-38	511-78							
PPE48_NPVAC	48.3 KD IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	96-123								
PPEN1_ADEGX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SAJ)	1273-1299	1775-1802	2236-2263						
PPOL1_BATMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	1774-1801	2334-2361							
PPOL1_BATMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	481-508	1909-1941							
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	170-197	636-677	938-985	1161-1195					
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	1096-1123								
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	240-281	801-828							
PPOL1_BATMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-287	801-828							
PPOL1_BATMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	11-38								
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	548-576								
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	982-1009								
PPOL1_TRSVR	RNA1 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	177-44	1030-1057	1245-1272						
PPOL9_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-1-27)	639-660	1082-1113	1303-1330	2233-2261	2478-2507	2609-2636	3613-3642		
PPOL9_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	1303-1333	2143-2171	2519-2546	2803-2829	3223-3250				
PPOL9_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	96-123								
PPOL9_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	7-34	664-694	1062-1099	1900-1930					
PPOL9_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	1040-1076								
PPOL9_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GREGG5)	645-672	841-868	1031-1057						
PPOL9_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1024-1060	1881-1908							
PPOL9_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	644-671	1022-1051							
PPOL9_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	1024-1060								
PPOL9_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	126-154								
PPOL9_CTVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	1838-1883	2890-2935	2989-3016						
PPOL9_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1544-1571	1838-1885	2908-2935	3081-3016	3117-3147				
PPOL9_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	1544-1571	1838-1885	2485-2510	2908-2935	3082-3016	3117-3147			
PPOL9_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	1544-1571	1838-1885	2908-2935	3117-3147	3146-3173				
PPOL9_DEN3J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN JAMAICA)	1544-1571	1838-1885	2905-2932	3079-3013	3114-3144	3145-3170			
PPOL9_DEN3P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN PH139951)	1134-1161	1448-1475							
PPOL9_DEN3T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN TONGA 1974)	837-864	1542-1569	1837-1884	2494-2521	2980-3014	3145-3172			
PPOL9_DEN1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1	2885-2910	2977-3011	3142-3169						
PPOL9_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2111-249								
PPOL9_EC110	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)									

PGENE	107x17bz4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PROLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	70-108	1484-1518	1522-1563						
PROLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETOGENIC)	70-97	1486-1520	1524-1565						
PROLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	70-97	1486-1520	1524-1565						
PROLO_EMCG	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	70-108								
PROLO_EMCGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	3-41								
PROLO_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	302-329	1119-1146							
PROLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	301-328	1119-1146							
PROLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND O1BFS)	1119-1146								
PROLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU[C-S8])	101-128								
PROLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	302-329								
PROLO_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	699-726	1195-1222	1263-1333	1434-1481	2068-2093	2406-2440			
PROLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	699-726	1195-1222	1263-1333	1406-1440	2332-2359				
PROLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	302-329	1045-1072							
PROLO_HCV1I	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	302-329	1045-1072							
PROLO_HCV1A	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J4)	274-401	2089-2116							
PROLO_HCV1B	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	1049-1076	2089-2116							
PROLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	278-405	782-729	1045-1072						
PROLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	302-329	1045-1072							
PROLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	702-729	1045-1072							
PROLO_HPAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 2AA)	203-237	1021-1048	1117-1149	1434-1481					
PROLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CJC)	203-237	1021-1048	1117-1149	1434-1481					
PROLO_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	203-237	1021-1048	1117-1149	1434-1481					
PROLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	203-237								
PROLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	182-216								
PROLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	203-237	1021-1048	1103-1149						
PROLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	203-237	1021-1048	1103-1149						
PROLO_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	203-237	1021-1048	1103-1149						
PROLO_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	203-237	1025-1052	1115-1142						
PROLO_HAVI4	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14	17-44	559-586	632-670	1877-1904					
PROLO_HAVIB	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B	1132-1159	1655-1682							
PROLO_HAV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2	1125-1152	1532-1559							
PROLO_HAV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89	883-910	1141-1168	1366-1607	1862-1889					
PROLO_HAEV7	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	876-910								
PROLO_BDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	231-277								
PROLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	214-248	983-1010	2796-2833						
PROLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	214-248	983-1010	2796-2833						
PROLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	214-248	983-1010	2796-2833						
PROLO_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	141-175	911-938							
PROLO_KUNUM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	986-1007								
PROLO_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	431-465	1634-1661							
PROLO_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	431-465								
PROLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS	431-465								
PROLO_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 326)	131-185								
PROLO_MOFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT	671-698	3056-3083	3303-3330						
PROLO_MOMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	10-37								
PROLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	212-256								
PROLO_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	24-51	944-971							
PROLO_PEAVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	377-404	704-738	831-858	900-927	1167-1201	1485-1512	1787-1814	2433-2464	
PROLO_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1060-1100	1901-1931							
PROLO_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	670-697	1061-1101	1903-1933						
PROLO_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1061-1099	1901-1931							
PROLO_POLIW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1061-1099	1901-1931							
PROLO_POLIJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 3132?)	1060-1098	1900-1930							
PROLO_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P3/LEON/37 AND P3/LEON 12A1[B])	1060-1098	1900-1930							
PROLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	921-948	1498-1525	2771-2798						
PROLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	1134-1187								

PCGENE	10?a11?8s4	AB Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 4	AREA 5	AREA 1	AREA 2	AREA 1	AREA 2
FILENAME	PROTEIN	VIRUS									
PPOL0_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	920-947	1497-1524	2770-2800						
PPOL0_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	920-947	1497-1524	2770-2797						
PPOL0_PPVTA	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA)	500-527								
PPOL0_PRSV1	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA 5-1)	391-418								
PPOL0_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	489-516								
PPOL0_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	1111-1137	1110-1137							
PPOL0_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPD1)	271-315								
PPOL0_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O) (PVY)	433-460	701-735		1486-1513	1777-1811				
PPOL0_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	318-345	701-735		1486-1513	1777-1811				
PPOL0_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	433-460	701-735							
PPOL0_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	433-460	701-735							
PPOL0_PVYV1	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	1124-1151	2707-2734							
PPOL0_SCMV3	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	10-37								
PPOL0_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UO 76)	1024-1050								
PPOL0_SVDVU	GENOME POLYPROTEIN	1024-1050									
PPOL0_TBEV3	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	87-121	230-272	1612-1661	2265-2292	2909-2936				
PPOL0_TBEVW	GENOME POLYPROTEIN	BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	1632-1659								
PPOL0_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS	845-872	1148-1175	1616-1643	1773-1800					
PPOL0_THEV8	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8386)	79-117	200-237							
PPOL0_THEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	90-117	200-237							
PPOL0_THEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	232-263	773-800							
PPOL0_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	406-433	670-704	2708-2742						
PPOL0_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	202-229								
PPOL0_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	210-254	1185-1212							
PPOL0_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	436-463								
PPOL0_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	436-463								
PPOL0_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	69-96								
PPOL0_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS	1063-1101	1901-1933							
PPOL1_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1402-1467	1894-1921							
PPOL1_EEVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	445-472								
PPOL1_FCVC0	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	1034-1061								
PPOL1_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	219-246	249-276							
PPOL1_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	219-246	249-276							
PPOL1_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	219-246	249-276							
PPOL1_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	218-245	248-275							
PPOL1_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	218-245	248-275							
PPOL1_MDDBV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	955-982								
PPOL1_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	2451-2480								
PPOL1_RUDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	111-147	1651-1684							
PPOL1_RVFN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	1037-1084	1477-1504	2418-2445						
PPOL1_RVFT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	146-173	1087-1114							
PPOL1_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN TherIEN)	2060-2087								
PPOL1_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1134-1161								
PPOL1_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	936-970								
PPOL1_WEEV	NONSTRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	4-31								
PPOL1_BDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	231-258								
PPOL1_BDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	231-258								
PPOL1_BDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	231-258								
PPOL1_BDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	231-258								
PPOL1_BDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN P2G-98)	231-258								
PPOL1_BDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	231-258								
PPOL1_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	256-283								
PPOL1_RVFN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	939-973								
PPOL1_RVFT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973								
PPOL1_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1138-1165								
PPOL1_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HOSP AND HOLP)	1138-1165								
PPOL1_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	928-947								
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	693-766	715-742							

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	886-924								
PPOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	333-360	838-865	1075-1102	1178-1205	1313-1347				
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	472-505	826-853							
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	472-505	826-853							
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	471-504	825-852							
PPOL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	532-599	627-654							
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-473								
PPOL_FMVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-430								
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703							
PPOL_HTL1A	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-712								
PPOL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	674-712								
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	218-245	620-661							
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	230-257	637-673							
PPOL_HV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	230-257	632-673							
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	230-257	632-673							
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-244	624-660							
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	218-245	620-661	921-951						
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	223-249	634-665							
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	217-244	476-510	619-660						
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	221-248	623-664							
PPOL_HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	218-245	625-661							
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-244	624-660							
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	218-245	620-661							
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	230-257	637-673							
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	217-244	619-660							
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE U	217-244	513-540	619-660						
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	217-244	619-660							
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-582								
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	471-562								
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600								
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205,7)	491-568								
PPOL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562								
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	471-529								
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-563								
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	473-562								
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582								
PPOL_IPHA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	200-227	354-381	461-499						
PPOL_IPMA	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	211-238	302-329	400-427						
PPOL_IPMAI	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	130-157	221-248							
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	204-231								
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	453-480								
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	805-832								
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	805-832							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217							
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	574-612	670-697							
PPOL_OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	67-94	471-505	873-900						
PPOL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	797-824								
PPOL_RTBV	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-93	176-203	202-229	410-437	447-476	1022-1049		
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-93	176-203	202-229	410-437	447-476	1022-1049		
PPOL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	427-454								
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	547-574	637-671						
PPOL_SIVA2	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-72								
PPOL_SIVA3	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 85 ISOLATE)	71-98								
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	436-463	482-516	642-669						
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	478-515								
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-691								
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	242-269	626-685							

PCGENE	(07:1:11):4	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS	237-334	636-670							
PPOL_SIVCB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	533-560								
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MAI4142.81 ISOLATE)	533-560								
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)									
PPOL_SIVSK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236SK014 ISOLATE)	496-533								
PPOL_SIVSM	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJSC13 ISOLATE)	499-536								
PPOL_SIVSP	POL POLYPROTEIN	SPUTNEL MONKEY RETROVIRUS (SMRV-H)	601-638								
PPOL_SMRVH	POL POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	368-395	348-419							
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	578-612	670-697							
PPOL_SRV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	490-524	881-919							
PPOL_VLV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	89-116	490-524	881-919						
PPOL_VLV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	490-524	881-919							
PPR1_BMRTVB	PROTEIN PR23	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	286-315								
PPR1_BMRTVC	PROTEIN PR23	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	45-79								
PPR1_BMRTVG	PROTEIN PR23	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	167-201								
PPYHD_BMRTVG	POLYHEDRIN PRECURSOR	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	37-71								
PPYHD_CPVBM	POLYHEDRIN	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	13-47								
PPYHD_NPVAC	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	14-48	201-238							
PPYHD_NPVAS	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	13-46								
PPYHD_NPVBM	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVBS	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	13-46								
PPYHD_NPVHC	POLYHEDRIN	HYPHANTRIA CUNEA NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVLD	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVMB	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	13-47								
PPYHD_NPVOP	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVPF	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVSE	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	14-48								
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	41-48								
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	22-62								
PREV_VLV	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	7-41	88-119	163-190						
PUDI_ASFM2	RIBONUC-DIPHOSPH REDUCT LARGE CHA	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL. 20/1)	622-649								
PUDI_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	73-102								
PUDI_HSV1B	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	324-351								
PUDI_HSV2A	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	367-401								
PUDI_VACCC	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-401								
PUDI_VACCV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN WR)	367-401								
PUDI_VARV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARIOLA VIRUS	118-146								
PUDI_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA ZOSTER VIRUS (STRAIN DUMAS)	90-117								
PUDI_HSV1B	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	513-540								
PUPM_VACCV	RNA-POL-ASSOC TRANS SPEC FACTOR	VACCINIA VIRUS (STRAIN WR)	41-73	77-104	313-340						
PUPM_VARV	RNA-POL-ASSOC TRANS SPEC FACTOR	VARIOLA VIRUS	333-364	387-416	810-837	961-993					
PUPO1_VACCC	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-264	387-416	810-837	961-993	1011-1038				
PUPO1_VACCV	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN WR)	237-264	387-416	810-837	961-993					
PUPO1_VARV	DNA-DIRECTED RNA POL 147 KD	VARIOLA VIRUS	19-45	114-155							
PUPO3_CAPVX	DNA-DIRECTED RNA POL 132 KD	CAPRIPOXVIRUS (STRAIN KS-1)	211-241	481-509							
PUPO3_COWPX	DNA-DIRECTED RNA POL 132 KD	COWPOX VIRUS	211-241	481-509							
PUPO3_VACCV	DNA-DIRECTED RNA POL 132 KD	VACCINIA VIRUS (STRAIN WR)	211-241	481-509							
PUPO3_VARV	DNA-DIRECTED RNA POL 132 KD	VARIOLA VIRUS	34-63								
PUPO4_CAPVX	DNA-DIRECTED RNA POL 35 KD	CAPRIPOXVIRUS (STRAIN KS-1)	8-35	43-70							
PUPO4_VACCV	DNA-DIRECTED RNA POL 19 KD	VACCINIA VIRUS (STRAIN WR)	43-70								
PUPO4_VARV	DNA-DIRECTED RNA POL 19 KD	VARIOLA VIRUS	1337-1360								
PUPOA_LELV	DNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	888-915	1639-1673							
PUPOL_EAV	DNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	535-602								
PUUT1_LACOR	DNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/CORE4/32(H0))	119-146								
PUUT1_LAINN	DNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	119-146								
PUUT1_LAUKS	DNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKR/63(H3N8))	119-146								
PUUT1_LAVPR	DNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146								
PUUT1_LAVUS	DNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704(H7))	119-146								

PCGENE	107a178a4	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRP3_IAHLO	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	119-146								
PRRP3_IAHTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/84)	119-146								
PRRP3_IAKOR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	119-146								
PRRP3_IALE1	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146								
PRRP3_IALE2	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	119-146								
PRRP3_IAMAN	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	119-146								
PRRP3_IANT6	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	119-146								
PRRP3_IAPI0	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	119-146								
PRRP3_IAPUE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	119-146								
PRRP3_IARUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	119-146								
PRRP3_IASIN	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	119-146								
PRRP3_IATKM	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	119-146								
PRRP3_IAVIT	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	119-146	327-354							
PRRP3_IAWIL	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	119-146								
PRRP3_IAZH3	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	119-146								
PRRP3_IAZIU	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	119-146								
PRRP3_IAZII	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119-146								
PRRP3_IAZTF	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	119-146								
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	157-194								
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	164-194								
PRRP3_INBSI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	157-194								
PRRP3_IABUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	537-567								
PRRP3_IACHI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	331-358								
PRRP3_IAHPR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	331-361	480-507							
PRRP3_IAZTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	487-514								
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	2-33	472-509							
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	2-33	472-509							
PRRP3_INCBE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	509-536								
PRRP3_INCJJ	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	509-536								
PRRP3_THOGV	RNA-DIRECTED RNA POL SUB P3	THOGOTO VIRUS	149-176	358-385							
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	516-543	724-751	1971-2008	3781-3811					
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	624-651	4326-4353							
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	27-54	557-584	943-984						
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	885-915	1129-1170							
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	885-915	1129-1170							
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	20-47	353-380	385-412						
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1510-1547	2296-2331	2547-2574						
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	165-200	416-443							
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	1032-1059								
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	88-114	317-350	1802-1861	1892-1919					
PRRPL_CDVO	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	24-51								
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	404-433	461-510	564-591	738-765	905-946	1993-2020			
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192	210-237	667-694	788-815	1007-1034	1138-1165	1453-1480	1776-1803	2062-2089
PRRPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	991-1018	1143-1170	1490-1524	1811-1838	2029-2067	2216-2266			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	991-1018	1490-1524	2239-2267						
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	95-122	196-223	2121-2148						
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	111-142	780-809	1602-1632						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	250-284	477-504	1979-2013						
PRRPL_PIUHT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIDA)	322-349	1564-1598	1687-1721	1901-1946					
PRRPL_PIUH4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	52-86	136-163	608-638	1081-1123	1994-2036	2115-2142			
PRRPL_PUUMH	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	388-415	557-591	731-758	864-891	926-953	1940-1971	1998-2025		
PRRPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	204-231	605-632	2068-2123						
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	204-231	605-632	2068-2123						
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	855-882								
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	1536-1563	1653-1687							
PRRPL_SEND5	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	629-656	1082-1116	1729-1756	2145-2180					
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	649-676	902-936	1549-1576	1965-2000					

PCGENE	10781784	AA Viruses (ss bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	639-656	1002-1116	1729-1736	2145-2180					
PRT_SEN02	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	461-488	564-591	731-738	905-931					
PRT_SEOUR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	1096-1123	1250-1277	1686-1710	2120-2147					
PRT_SV1WR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	825-859	1092-1119	1490-1530	1971-2000	2080-2107				
PRT_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	477-504	542-573	1119-1150	1195-1229	1336-1357	1415-1442	1671-1698	1837-1884	2093-2110
PRT_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR-01)	2166-2193	2324-2368	2771-2798						
		UNKNOWN VIRUS	142-187	1037-1071	1304-1331						
PRT_UUK	RNA POLYMERASE	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN HAZELHURST)	1338-1357	1809-1836							
PRT_VSVBN	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	1205-1233	1809-1836							
PRT_VSVJO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	1340-1367	1788-1798							
PRT_VSVSU	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	228-264	564-591							
PRJPO_AC15V	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	336-383								
PRJPO_BWYVF	PUTATIVE RNA-DIR RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	772-799								
PRJPO_BYDV1	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	772-799								
PRJPO_BYDVP	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	772-799								
PRJPO_BYDVR	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	93-127	277-304	667-694						
PRJPO_CARMV	PUTATIVE RNA-DIR RNA POL	CARNATION MOTTLE VIRUS	787-814	1040-1067							
PRJPO_CGMVS	PUTATIVE RNA-DIR RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	336-363	392-419							
PRJPO_DBDV1	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	661-688	717-744							
PRJPO_DBDVA	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	771-800								
PRJPO_DNVI	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	771-800								
PRJPO_DPAVS	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN ARMSTRONG)	814-844	1032-1079							
PRJPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	402-429	709-736	1012-1099						
PRJPO_PMNVS	PUTATIVE RNA-DIR RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	61-88								
PRJPO_REOVD	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	61-88								
PRJPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	68-95	218-245	791-818						
PRJPO_ROTBA	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	61-95	218-245	791-841	973-1002					
PRJPO_ROTBU	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	3-44	75-102	363-390	543-585					
PRJPO_ROTPC	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	65-95	102-129	791-839	973-1002					
PRJPO_ROTPG	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED	65-95	791-839	973-1002						
PRJPO_ROTSI	RNA-DIR RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	147-188								
PRJPO_SCVLA	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	163-204	241-271	1107-1134	1918-2008					
PRJPO_TACV	RNA POLYMERASE	TACAJBE VIRUS	220-257	1316-1343	1397-1424						
PRJPO_TMGMV	PUTATIVE RNA-DIR RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (THIV STRAIN U2)	99-133								
PRJPP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	315-370								
PRJPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	99-141								
PRJPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PRJPP_HRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PRJPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PRJPP_HRSVC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PRJPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-370								
PRJPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN SP-3-CA)	315-370								
PRJPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YANAGATA-1)	315-370								
PRJPP_PIIHB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	84-111	234-261	375-416						
PRJPP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	84-111	234-261	375-416						
PRJPP_PIIHE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CE-5713)	84-111	233-262	375-416						
PRJPP_PIIHG	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN GI-1483)	84-111	244-271	375-416						
PRJPP_PIIHK	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	167-194	223-256							
PRJPP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	167-194	223-256							
PRJPP_PIIHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS	34-91	255-282	285-314						
PRJPP_PIIB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	114-144	269-299							
PRJPP_PIIHA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PRJPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127								
PRJPP_SEN05	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	330-357	379-420							
PRJPP_SEN04	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/4)	330-357	379-420							
PRJPP_SENOF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	330-357	379-420							
PRJPP_SENOH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	330-357	379-420							
PRJPP_SENOZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	330-357	379-420							

PCGENE	107s178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-232	236-263							
PSODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	72-99								
PSODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	72-99								
PSPHR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	91-118	140-167	227-261	361-390					
PSPI1_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	286-313								
PSPI2_VACCV	SERINE PROTEINASE INHIBITOR 2	VACCINIA VIRUS (STRAIN WR)	59-86								
PSPIA_VACCC	SERINE PROTEASE INH 2 HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-65								
PT2C1_CHVP1	TYPE II RESTRICTION ENZYME CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	16-43								
PTAA2_VACCV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS	95-133								
PTAG8_FOWPV	TRANS-ACTIVATOR PROTEIN FP0	FOWLPOX VIRUS	3-51								
PTAG8_VACCV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS	3-30								
PTAG8_VARV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-30								
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-318								
PTALA_POVBO	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	503-537								
PTALA_POVHA	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	587-621								
PTALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	224-258	616-684							
PTALA_POVMJ	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN J)	513-540								
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	511-538								
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	508-535								
PTATR_NPVAC	TRANS-ACT TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	407-434	489-523	532-559						
PTATR_NPVBM	TRANS-ACT TRANS REG PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	412-439	494-528	537-564						
PTATR_NPVOP	TRANS-ACT TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	512-554								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1344-1371	1876-1903					
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2229							
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1673-1710							
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	102-129	228-262	567-611	962-993	1098-1181	1661-1688	1884-1911		
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1205-1232						
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	524-607	672-700	777-814	846-898	949-986	990-1017	1467-1497	2102-2135	
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	375-413								
PTMAF_AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	302-336								
PTOP1_SFVKA	DNA TOPOISOMERASE I	SHOPE FIBROMA VIRUS (STRAIN KASZA)	38-65	132-176							
PTOP1_VACCV	DNA TOPOISOMERASE I	VACCINIA VIRUS	38-65								
PTOP1_VARV	DNA TOPOISOMERASE I	VARIOLA VIRUS	38-65								
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	902-936								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-143								
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	120-147								
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	542-569						
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586-613								
PUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	15-42	302-358	368-402						
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL11_EBV	HYPOTHETICAL PROTEIN BBLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-42								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PUL14_VZVD	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PUL20_HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407								
PUL25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	204-231	362-389						
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	345-375								
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-143								
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-235								
PUL34_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-139								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								

PCGENE	107:1176:4	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
FILENAME	PROTEIN	VIRUS	470-497	853-884						
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	715-749	981-1014						
PUL37_HSVEB	GENE 37 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	111-45	445-737						
PUL37_HSVSA	GENE 61 PROTEIN	HERPES VIRUS SAIMIRI (STRAIN 11)	107-134	415-512	719-746	976-1003				
PUL37_VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	330-364							
PUL37_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	231-338							
PUL37_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	128-156	312-349						
PUL37_VZVD	GENE 13 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	114-148	448-485	763-790	892-933				
PUL37_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	488-515							
PUL37_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	488-515							
PUL37_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	190-217							
PUL37_HSVEA	91 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	159-186							
PUL38_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	185-212	787-814						
PUL38_EBV	DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220	943-970						
PUL38_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	138-157							
PUL38_HSVSA	PROB DNA REP GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	301-337							
PUL38_VZVD	PROB DNA REP GENE 8 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	74-101							
PUL39_HCMVA	HYPOTHETICAL PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92							
PUL39_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-73							
PUL39_HCMVA	UL39 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-36							
PUL3_HSVSA	HYPOTHETICAL GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	43-79							
PUL3_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	409-436							
PUL3_EBV	HYPOTHETICAL PROTEIN BKRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	538-565	729-768						
PUL37_HSVSA	HYPOTHETICAL PROTEIN 3R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	512-469							
PUL37_HSVSA	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	107-144	168-196						
PUL39_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	93-121							
PUL39_HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	26-53	314-381						
PUL39_HCMVA	PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71							
PUL39_HCMVA	HYPOTHETICAL PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN UGANDA-1102)	73-100	105-134						
PUL39_HSVSA	HYPOTHETICAL PROTEIN 33R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	4-31	443-477						
PUL4_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-58							
PUL80_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	90-124							
PUL80_HCMVA	HYPOTHETICAL PROTEIN UL120	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	115-136							
PUNO_HSVSA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	81-115							
PUNO_SFVKA	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	115-116	128-156						
PUNO_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	115-116	128-156						
PUNO_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	115-116							
PUNO_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	20-47							
PUS09_HCMVA	HYPOTHETICAL PROTEIN HCMLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	277-308							
PUS14_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-218							
PUS18_HCMVA	MEMBRANE PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	2-29							
PV131_ASFL5	L5 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L5137)	702-729							
PV133_ANYLE	133 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	2-29							
PV137_ASFL5	L5 137 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L5137)	59-86							
PV13K_TRVTL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	496-560	945-972						
PV140_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	79-113							
PV16K_TRVPS	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	23-54	710-737	840-864					
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	22-50	384-411	836-863	892-919				
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	240-276							
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	11-38							
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-38	864-902						
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-38							
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	4-31	372-399						
PV1A_PSVJ	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	11-38	271-298	376-403	857-884				
PV1A_TAV	1A PROTEIN	TOMATO ASPERMY VIRUS	4-31							
PV23K_NPVAC	23 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	140-170							
PV29K_PEBV	29 KD PROTEIN	PEA EARLY BROWNING VIRUS	176-197							
PV29K_TRVSY	29 KD PROTEIN	TOBACCO RATTLE VIRUS								

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	48-75								
PV2A_BBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	301-328								
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	178-205								
PV2A_CMVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	792-819								
PV2A_PSVJ	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	325-352	717-751							
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	313-340	722-756							
PV30K_HCMVE	30 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-221								
PV30K_TRVTC	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	130-160								
PV33P_ADE41	33 KD PHOSPHOPROTEIN	HUMAN ADENOVIRUS TYPE 41	15-42								
PV362_ASFB7	K'362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	75-102								
PV363_ASFB7	D'363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	3-30	172-199							
PV3A_BMV	3A PROTEIN	BROME MOSAIC VIRUS	11-38								
PV3A_CMVFN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	222-252								
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	217-252								
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	222-253								
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	222-253								
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	25-57								
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/181/66)	29-56								
PV3B_IBVB	3B PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	6-33								
PV50K_BYDVP	50 KD PROTEIN	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	119-146								
PV51K_BWYVF	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	424-451							
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GH)	113-147	424-451							
PV56K_PLRV1	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	124-151	438-472							
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	124-151	438-477							
PV58K_BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-155								
PV70K_PLRV1	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	110-140								
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	110-140								
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-134								
PVA06_VACCC	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	157-216	250-277	283-310	314-355					
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	156-215	249-276	282-309	313-354					
PVA06_VARV	PROTEIN A6	VARIOLA VIRUS	157-216	250-277	283-310	314-355					
PVA08_VACCC	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-206								
PVA08_VARV	PROTEIN A8	VARIOLA VIRUS	176-206								
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	60-95								
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	219-283								
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	220-284								
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	440-467								
PVA20_VACCC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-67	330-357							
PVA20_VARV	PROTEIN A20	VARIOLA VIRUS	8-67	330-357							
PVA22_VACCC	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	45-72								
PVA22_VARV	PROTEIN A22	VARIOLA VIRUS	56-83								
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-144								
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	95-144								
PVA28_VACCV	PROTEIN A28	VACCINIA VIRUS (STRAIN WR)	22-49								
PVA28_VARV	PROTEIN A28	VARIOLA VIRUS	22-49								
PVA30_VACCV	PROTEIN A30	VACCINIA VIRUS (STRAIN WR)	12-55								
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PVA31_VARV	PROTEIN A31	VARIOLA VIRUS	88-122								
PVA34_VACCC	PROTEIN A34	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-114								
PVA34_VACCV	PROTEIN A34	VACCINIA VIRUS (STRAIN WR)	87-114								
PVA34_VARV	PROTEIN A34	VARIOLA VIRUS	87-114								
PVA36_VACCV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	120-155								
PVA36_VARV	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	127-154								
PVA38_VACCC	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-81								
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-81								
PVA38_VARV	PROTEIN A38	VARIOLA VIRUS	44-91								
PVA39_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71	155-182							

PCGENE	107:178:6	All Viruses (no Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109	193-220							
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	145-172								
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	145-172								
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	146-173								
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	143-184								
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	143-184								
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	142-184								
PVA49_VACCC	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	61-91								
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	61-91								
PVA49_VARV	PROTEIN A49	VARIOLA VIRUS	61-91								
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	55-82	126-156	435-462						
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	55-82	126-156	435-462						
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS	22-49								
PVAL3_CLVK	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	79-106								
PVAL3_CLVN	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	79-106								
PVAL3_SLCV	AL3 PROTEIN	SQUASH LEAF CURL VIRUS	101-128								
PVAL3_TYLCV	AL3 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	79-129								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	93-129							
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-129							
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-129							
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-129							
PVAT_CAMVS	APHID TRANSMISSION PROTEIN		22-70	93-130							
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70								
PVAT_CERV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	102-138								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	52-82	103-130							
PVB03_VACCV	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-135								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	92-123	182-211	286-313	324-361					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	92-123	182-211	286-313	324-361					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	89-127	182-211	286-313	324-361					
PVB05_VACCO	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LC16MO)	254-284								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-284								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LISTER)	254-284								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN WR)	254-284								
PVB07_VACCV	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	28-62								
PVB08_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-53								
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-53								
PVB11_VACCC	PROTEIN B11	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-54								
PVB11_VACCV	PROTEIN B11	VACCINIA VIRUS (STRAIN WR)	5-38								
PVB16_COWPX	IL-1 BIND PRO PRECURSOR	COWPOX VIRUS	113-140								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	258-285								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)	258-285								
PVB18_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375								
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375								
PVB18_VARV	PROTEIN B18	VARIOLA VIRUS	337-378								
PVB19_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	182-212								
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	180-210								
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	180-210								
PVB19_VARV	SURFACE ANTIGEN S PRECURSOR	VARIOLA VIRUS	180-210								
PVB20_VACCC	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-82								
PVB21_VACCV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	64-91								
PVBL1_BGMV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	120-147	248-275							
PVBL1_CLVK	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	118-145								
PVBL1_CLVN	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	118-145								
PVBL1_PYMVV	BL1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	120-147								
PVC02_VACCC	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	405-432								
PVC02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN WR)	41-71	405-432							

PCGENE	187a178a4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVC04_SFVKA	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	209-236	484-515							
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46								
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	12-46								
PVC05_SFVKA	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-125	152-179							
PVC05_VACCC	PROTEIN C5	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-65								
PVC05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	38-65								
PVC05_VARV	PROTEIN C5	VARIOLA VIRUS	36-66								
PVC07_VACCV	PROTEIN C7	VACCINIA VIRUS (STRAIN WR)	80-111								
PVC07_VARV	PROTEIN C7	VARIOLA VIRUS	80-111								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-69	82-116	178-205	252-279	289-325	575-605			
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	42-69	82-116	178-205	252-279	289-323	575-605			
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-163								
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	136-163								
PVC13_SFVKA	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-30	39-66	137-182	206-240					
PVC17_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-152								
PVC18_VACCC	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-74								
PVC19_SFVKA	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	56-97								
PVC20_VACCC	PROTEIN C20/B26	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-99								
PVC22_VARV	PROTEIN C22/B28 HOMOLOG	VARIOLA VIRUS	299-326								
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6/ STRAIN UGANDA-1102)	136-170	355-382							
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	769-799								
PVCG3_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-165	199-248							
PVCOM_ADE02	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	88-115								
PVCOM_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	87-114								
PVD05_FOWP1	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	6-33	184-211	321-348						
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	240-267	333-360							
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	240-267								
PVD05_VARV	PROTEIN D5	VARIOLA VIRUS	240-267								
PVD09_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-150								
PVD09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	123-150								
PVD09_VARV	PROTEIN D9	VARIOLA VIRUS	123-160								
PVD10_SFVKA	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	18-52								
PVDBP_CERV	DNA-BINDING PROTEIN	CARNATION ETCHED RING VIRUS	2-35								
PVE02_VARV	PROTEIN E2	VARIOLA VIRUS	282-322								
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-116	437-464							
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	89-116	437-464							
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	89-116	367-394	437-464						
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	180-207								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	103-130								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89								
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	25-59								
PVE1_HPV47	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	146-173								
PVE1_HPV57	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	21-48								
PVE26_NPVAC	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-113								
PVE2_CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	5-34								
PVE2_HPV05	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	17-51								
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	157-184	334-361							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	312-342							
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	313-340								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-186								
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	159-193								
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	304-331								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	158-192	327-354							
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	7-34	323-357							
PVE2_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	17-51	148-175	276-303						
PVE2_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	137-184								
PVE2_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	166-193								
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	2-36	309-336							
PVE2_HPV5B	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	17-51								
PVE2_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	120-150								
PVE2_PCPV1	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	267-294	327-361							
PVE4_HPV05	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	202-229								
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	66-93								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE4_HPV31	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	75-102								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	63-97								
PVE4_HPV5B	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	202-229								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	30-60								
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	30-60								
PVE5_HPV35	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	27-54								
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	11-41								
PVE5_PCPV1	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	35-62								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	75-102								
PVE6_HPV31	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	69-96								
PVE6_HPV39	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	71-102								
PVE6_HPV41	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	119-146								
PVE6_HPV45	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	75-102								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	72-99								
PVE6_HPVME	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	71-102								
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	620-647								
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	411-438								
PVENV_DHVII	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61)	318-366								
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	120-147								
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	313-347								
PVF03_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110	185-212							
PVF03_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	71-110	185-212							
PVF05_VACCP	36 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN L-IVP)	33-60								
PVF05_VACCV	36 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN WR)	33-60								
PVF06_VARV	PROTEIN F6	VARIOLA VIRUS	10-44								
PVF11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	274-321								
PVF11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	270-317								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	274-321								
PVF12_VACCC	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-37	113-140	554-581						
PVF12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	10-37	113-140	554-581						
PVF12_VARV	PROTEIN F12	VARIOLA VIRUS	10-37	202-236	554-581						
PVF16_VACCC	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	35-62	152-179							
PVF16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	35-62	152-179							
PVF16_VARV	PROTEIN F16	VARIOLA VIRUS	35-62	149-179							
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	146-173								
PVFUS_ORFNZ	10 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	59-86								
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-64								
PVFUS_VACCV	KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	37-64								
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-252	301-335							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	164-191	240-274							
PVG01_VARV	PROTEIN G1	VARIOLA VIRUS	225-252	301-335							
PVG02_VACCV	ISATIN-B-TSC DEP PROTEIN	VACCINIA VIRUS (STRAIN WR)	96-123								
PVG02_VARV	ISATIN-B-TSC DEP PROTEIN	VARIOLA VIRUS	96-123								

PCGENE	107s178s4	All Viruses (no Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVG03_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVG05_VACCC	PROTEIN G5	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75	131-161	225-289	355-389					
PVG05_VARV	PROTEIN G5	VARIOLA VIRUS	48-75	124-161	255-289	355-389					
PVG07_HSV11	HYPOTH GENE 7 MEMB PRO	ICTALURID HERPESVIRUS 1	71-98								
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	308-338								
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	271-301								
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	308-338								
PVG12_SPV1R	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	11-45								
PVG17_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	177-204								
PVG18_HSV11	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG1_SPV1R	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	260-287								
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS 4	287-314	383-410							
PVG22_HSV11	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	373-400	581-622	668-705	766-824					
PVG24_HSV11	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1	31-58								
PVG28_HSV11	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	253-290	497-528							
PVG2R_AMEPV	HYPOTHETICAL G2R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	33-64	91-118							
PVG2_SPV1R	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	285-326								
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4	146-173	175-205	262-310						
PVG34_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1	95-122								
PVG37_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	651-678	1088-1115							
PVG3L_AMEPV	HYPOTHETICAL G3L PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	2-29								
PVG3_SPV1R	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	15-49								
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4	18-52	87-148							
PVG45_HSV5A	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165								
PVG46_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-169	346-373	897-924	973-1007					
PVG48_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394								
PVG4R_AMEPV	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	4-31								
PVG4_SPV1R	GENE 4 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	116-146								
PVG51_HSV11	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG52_HSV5A	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74								
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG5_SPV1R	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	65-92								
PVG5_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	56-83								
PVG63_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	550-584								
PVG64_HSV11	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1213-1254								
PVG66_HSV11	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	362-406								
PVG67_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1342-1369								
PVG68_HSV11	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG75_HSV11	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVG7_SPV4	GENE 7 PROTEIN	SPIROPLASMA VIRUS 4	14-44								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	1230-1260	2408-2435							
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	399-426		1022-1084	1278-1305					
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MŒBUS)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	770-797	809-875	1056-1112						
PVGL2_CVM44	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	643-684	1030-1092							
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	36-63	591-632	978-1040						
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	643-684	1030-1092							
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	502-543	889-951							

PCGENE	10/31/1994	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVGL3_CVPFS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772)	69-110	692-733	1072-1145	1333-1389					
PVGL3_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN MILLER)	69-110	692-733	1069-1145	1333-1389					
PVGL3_CVPPA	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR46)	73-107	696-731	1067-1143	1331-1387					
PVGL3_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURDUE)	69-107	696-731	1067-1143	1331-1387					
PVGL3_CVPRU	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM/137004 / BRITISH ISOLAT	468-509	845-921	1129-1165						
PVGL3_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM/4)	468-509	845-921	1129-1165						
PVGL3_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB77)	69-107	696-731	1063-1143	1333-1387					
PVGL3_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGL3_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-233	454-481	709-736	1072-1148	1196-1192				
PVGL3_IBV6	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	809-836	876-903	1057-1091						
PVGL3_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	808-835	875-902	1056-1090						
PVGL3_IBVD2	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	809-836	876-903	1057-1091						
PVGL3_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	808-835	875-902	1056-1090						
PVGL3_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	808-835	875-902	1056-1090						
PVGL3_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	93-122	631-658							
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-88	397-424	440-467	851-878					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	50-88	397-424	435-462	832-879					
PVGLB_HSV1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454								
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	447-474								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	443-470	934-961							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	486-513	616-643							
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	933-960							
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-120	352-379							
PVGLB_MDAVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475							
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295-322								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295-322								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-65	134-202	216-243	442-469	486-531				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	134-202	216-243	444-471	488-533				
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	134-202	216-243	444-471	488-533				
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	232-293	340-367							
PVGLF_HRSV1	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65	134-202	442-471	488-515					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65	134-202	213-243	488-518					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	134-202	216-243	444-471	488-515				
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	38-65	134-202	213-243	442-471	488-518				
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAINS EDMONSTON AND HALLE)	228-262								
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	211-265								
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	228-262								
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	447-486							
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	447-486							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	447-486							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	131-178	426-511							
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	131-178	426-512							
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	131-178	426-512							
PVGLF_NDVH3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	131-178	426-512							
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	131-178	426-512							
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	131-178	426-512							
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	131-178	192-219	426-512						
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MYADERA/51)	131-178	437-512							
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	131-178	433-512							
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	131-178	428-512							
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS GB/48)	131-178	426-512							

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	151-178	426-512							
PVGLF_PIODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	36-63	221-262	309-336						
PVGLF_PI1HC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	147-174	210-266							
PVGLF_PI2H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	90-117	141-175	238-266	483-528					
PVGLF_PI2HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	90-117	141-175	238-266	483-528					
PVGLF_PI2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	90-117	141-175	238-266	483-528					
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	459-497						
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	115-182	207-241	457-497						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	224-265	458-485							
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	224-265	458-506							
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	122-149	211-245	480-507						
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	122-149	211-245	480-507						
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	122-149	211-245	480-507						
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	122-149	211-245	480-507						
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	122-149	211-245	480-507						
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	144-185	241-269	459-496						
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	137-171	417-444							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	124-161	193-200	457-484						
PVGLG_BEFV	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-557								
PVGLG_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-123								
PVGLG_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	63-93								
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD5857)	66-107								
PVGLG_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6190)	243-273								
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 8/60)	66-93								
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	271-298								
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
PVGLG_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	489-519								
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	472-499								
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	549-576	619-648							
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-136	270-297							
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-135								
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	62-89	360-403							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	388-415								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-111								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	512-546	914-941	1128-1255						
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	913-950								
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	340-374	504-535	682-709						
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	945-972								
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	73-100	693-720							
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	75-102								
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	75-102								
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	75-102								
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	628-655	1069-1101							
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	69-96								
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	72-110								
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	72-110								
PVGLM_SEOUI	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	513-540	693-720							
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	73-100	513-540	694-721						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	73-100	513-540	694-721						
PVGLN_BEFV	NONSTRUCT GLYCOPRO GNS PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-564								
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	48-82	1145-1179	1184-1211	1505-1532					
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSO	JUNIN ARENAVIRUS	14-41								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSO	LASSA VIRUS (STRAIN GA391)	86-113								
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSO	MOPEIA VIRUS	86-113	316-346							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSO	PICHINDE ARENAVIRUS	334-375								
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS	109-136	315-350							
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN V5)	303-338								

PCGENE	107x17814	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACAUBE VIRUS (STRAIN VT)	302-337							
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACAUBE VIRUS (STRAIN TRVL 11598)	303-338							
PVGNM_CPSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-221							
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149							
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSO	EBOLA VIRUS	280-314							
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN MUSOKE)	559-589	619-646						
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN POPP)	559-589	619-646						
PVH05_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	132-166							
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	132-166							
PVH05_VARV	PROTEIN H5	VARIOLA VIRUS	64-91	130-184						
PVHEL_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	130-160							
PVHRP_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	241-275							
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	241-275							
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	90-117	133-180						
PVI01_VARV	PROTEIN I1	VARIOLA VIRUS	90-117	133-180						
PVI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	160-190							
PVI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	160-190							
PVI03_VARV	PROTEIN I3	VARIOLA VIRUS	160-190							
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	290-317	548-575	593-632					
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	290-317	548-575	593-632					
PVI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	290-317	548-575	593-632					
PVIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288							
PVIE2_NPVOP	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	355-385							
PVIEN_NPVAC	IE-ACG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	317-325	343-400						
PVIF_HVIRH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	62-89							
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	2-36							
PVIMP_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174							
PVIMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-107							
PVINT_SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-100							
PVJ01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56							
PVJ01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56							
PVJ01_VARV	PROTEIN J1	VARIOLA VIRUS	22-56							
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-383							
PVL1_FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-65							
PVL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392							
PVL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210							
PVL1_HPV33	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-46							
PVL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	345-372							
PVL1_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46							
PVL1_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	43-72							
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445							
PVL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	413-442							
PVLJ_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-357							
PVLJ_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	330-357							
PVL56_IRVI	L56 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	625-652						
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MI	REOVIRUS (TYPE 1 / STRAIN LANG)	290-317							
PVM1_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	625-662							
PVM22_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661							
PVM2_REOVI	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 2 / STRAIN D5/JONES)	624-661							
PVM2_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-N	REOVIRUS (TYPE 3 / STRAIN DEARING)	159-186	343-370	436-483	631-690				
PVMA2_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	124-152							
PVMA2_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	124-151							
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	219-246							
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246							
PVMAT_INCJ	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN CJ/50)	151-185							
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	247-274							
PVMAT_PIVHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	96-123							

PCGENE	107s178s4	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMAT_PIJB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PVMAT_PIJH4	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	323-353								
PVME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	175-209								
PVME1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	175-209								
PVME1_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-48	184-218							
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-48	184-218							
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE B42)	21-48	184-218							
PVME1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	184-218								
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	220-254	273-324							
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/1)	29-56	220-254	273-324						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	227-254	273-324							
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	220-254	273-324							
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	220-254	273-324							
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	220-254	273-324							
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	26-53	100-127							
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	4-31	78-118							
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328								
PVMT1_DHVI1	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	38-65	237-264							
PVMT8_MYXVL	M-T8 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	163-190								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	465-492								
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	83-113								
PVNCN_PAVBO	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	149-176								
PVNCS_ADVG	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	86-148								
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002)	14-41	279-339	487-517	585-612	780-817	821-848			
PVNCS_MUMIM	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	35-62	262-289							
PVNCS_MUMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	35-62	262-289							
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	236-270								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	35-62								
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-55	169-196	316-346						
PVNS1_EHDV2	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN ALBERTA	411-438								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	171-198								
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-198								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	171-198								
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	171-198								
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	168-195								
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	171-198								
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	171-198								
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-198								
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	171-198								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	171-198								
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	171-198								
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/82)	171-198								
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	171-198								
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	171-198								
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	171-198								
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	171-198								
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	171-198								
PVNS2_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	87-114								
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78								
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	51-78								
PVNS2_INCJJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98								
PVNS3_CVPFS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	9-36								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	9-36								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	6-40								
PVNS7_CVCAE	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-45								

PCGENE	10?s17844	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	8-42								
PVNS7_CVFEI	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	34-61								
PVNS7_CVPFS	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772)	34-61								
PVNS7_CVPPU	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIDLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD)	34-61								
PVNS7_CVPRU	NONSTRUCTURAL PROTEIN 7	PORCINE RESPIRATORY CORONAVIRUS	34-61								
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	8-42								
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	41-75								
PVNSC_PIIM	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-99								
PVNSM_INSV	NONSTRUCTURAL PROTEIN NS-M	INFATIENS NECROTIC SPOT VIRUS	262-296								
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	57-84								
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS	146-180								
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	311-369								
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/TRINORJE/695/76)	378-405								
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	378-405								
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	378-405								
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	378-405								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	378-405								
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	378-405								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	378-405								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80)	378-405								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	378-405								
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-405								
PVNUC_IADEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1)	378-405								
PVNUC_IADEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	378-405								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	378-405								
PVNUC_IADMG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/918/74)	378-405								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MIANITOBA/1/53)	378-405								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-405								
PVNUC_IADUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	378-405								
PVNUC_IAENJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	378-405								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	378-405								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	378-405								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	378-405								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	378-405								
PVNUC_IAGBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-405								
PVNUC_IAGUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	378-405								
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-405								
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1324/78)	378-405								
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	378-405								
PVNUC_IAGUK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/223/84)	378-405								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	378-405								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/A945/60)	378-405								
PVNUC_IAHBC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKORY/46)	378-405								
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/ILLIN/1/79)	378-405								
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	378-405								
PVNUC_IAHMG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	378-405								
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	378-405								
PVNUC_IAHO3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	378-405								
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	378-405								
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	378-405								
PVNUC_IAKJE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	378-405								
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	378-405								
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	378-405								
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	378-405								
PVNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	378-405								
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	378-405								
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	378-405								
PVNUC_IAOHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/81)	378-405								

PCGENE	107:178:4	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	378-405								
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-405								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	378-405								
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	378-405								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	378-405								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	378-405								
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	378-405								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	378-405								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	378-405								
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	378-405								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	378-405								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	378-405								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-405								
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	378-405								
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	378-405								
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	378-405								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/19/76)	378-405								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	378-405								
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	378-405								
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	378-405								
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	378-405								
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	378-405								
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	378-405								
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	378-405								
PVNUC_IAZH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	378-405								
PVNUC_IAZH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	378-405								
PVNUC_IAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	378-405								
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	378-405								
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	378-405								
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	378-405								
PVNUC_IAZJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	378-405								
PVNUC_IAZJ2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	378-405								
PVNUC_IAZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	378-405								
PVNUC_IAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	378-405								
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	378-405								
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	378-405								
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	378-405								
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	378-405								
PVNUC_IAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	378-405								
PVNUC_IAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	378-405								
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	378-405								
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	378-405								
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	416-443	451-478						
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	366-407								
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	366-407								
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37	109-138	581-608						
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	7-37	109-138	581-608						
PVOR1_FXMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	1023-1050								
PVOR1_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	996-1023	1527-1561							
PVOR1_PMV	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS	948-978	1481-1532							
PVOR1_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	597-627								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	698-725	1017-1044							
PVOR1_PVXO3	165 KD PROTEIN	POTATO VIRUS X (STRAIN X3)	698-725	1017-1044							
PVOR1_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	312-342	691-721							
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	7-41								
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-48								
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	6-33	37-64							

PCGENE	187:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP10_RGDV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS	205-252								
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS	151-181	227-254							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS	53-80								
PVP12_WTV	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS	81-108								
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ)	81-108								
PVP19_AMCV	CORE PROTEIN P19	ARTICHOKE MOTTLED CRINKLE VIRUS	73-100								
PVP19_TBSVC	CORE PROTEIN P19	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	73-100								
PVP23_HSVSA	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN 11)	2-29								
PVP26_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVP26_HSVSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	48-75								
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	277-304	410-437	632-662	907-934					
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	815-846								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	898-925								
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-146								
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	72-103	415-453							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	39-94	523-553							
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	39-94	524-554							
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	70-101	533-567							
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	52-99	128-156	518-545	705-746					
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96								
PVP30_ASFE7	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75)	39-75								
PVP32_ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	39-75								
PVP35_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	83-119								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	80-107	231-258							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	80-107	231-258							
PVP35_NPVAC	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	270-297								
PVP35_NPVBM	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	68-102								
PVP35_VACCV	DNA/NODOM ENV PRO P35	VACCINIA VIRUS (STRAIN WR)	178-205								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	134-161	264-291							
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	263-290								
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	132-159								
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-252								
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-252								
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	214-252								
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	209-243	798-832							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AUSTRAL	798-832								
PVP3_GFLV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS	99-133								
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	39-66	329-384							
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-67	350-377	451-497	619-692					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	205-232	344-372							
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	515-549								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-208	495-522							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	589-619							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	584-622							
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75								
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	48-75								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	48-75								
PVP4B_FOWPV	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	80-110								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	7-37								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	7-37								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	34-61	576-603							
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	34-61	576-603							
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	34-61	576-603							
PVP4_BTV2A	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	552-622								
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	595-629								

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	8-35	584-622							
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	595-629								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	112-146	235-269	552-629						
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	5-32								
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	8-35	572-628							
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	8-35	279-306	565-621						
PVP4_ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	112-139	584-629						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	279-306	565-621						
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	8-35	279-306	565-621						
PVP4_ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	8-35	111-138							
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	77-104	279-306	577-621					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	8-35	279-306	565-621						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	8-35	572-610							
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13	8-35	573-628							
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	8-35	577-621							
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	8-38	105-135	235-262						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	8-35	572-627							
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	8-35	279-306	590-617						
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	8-35	577-621							
PVP4_ROTPS	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	584-625							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	5-33	115-161	293-320						
PVP4_ROTPO	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	8-35	572-628							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	8-35	112-146	584-625						
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	8-38	584-622							
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	8-35	589-619							
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	8-35	130-157	584-622						
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	28-62								
PVP5_AHSV4	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	113-183	191-218							
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	53-80	99-126							
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	53-80	92-126							
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	53-80								
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	53-80	89-126							
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	53-80	92-126	148-182						
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	53-80	89-126							
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	31-80	191-218	399-426						
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS	648-675								
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	161-193								
PVP61_MRDV	PROB NONSTRUCT 41.0 KD PRO	MAIZE ROUGH DWARF VIRUS	153-202								
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	36-63								
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	157-189								
PVP64_NPVOP	MAJOR ENV GLYCOPRO PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	45-72								
PVP67_NPVAC	MAJOR ENV GLYCOPRO PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-81								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	157-189								
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	157-189								
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	157-189								
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	161-193								
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	133-172								
PVP6_RDV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS	10-37	354-381							
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	413-440								
PVP75_HSV5A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	929-977							
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-78	370-397							
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	16-43								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	458-485								
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	101-142	240-298							
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	132-159								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	105-132								
PVP8_FOWPV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	211-238								

PCGENE	107a178s4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	29-56	112-143							
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	197-224								
PVP9_WTV	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS	22-49								
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ)	22-49								
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	196-223								
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	127-186	238-265							
PVPRT_ADEM1	ENDOPROTEASE	MOUSE ADENOVIRUS TYPE 1	167-194								
PVPU_HV1A2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	3-31								
PVPU_HV1BI	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB10 AND IIXIB3 ISOLATES)	5-48								
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	21-48								
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-49								
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	5-48								
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-30								
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33								
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIXB2 ISOLATE)	5-48								
PVPU_HV1J3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	2-29								
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	22-49								
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	5-32								
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33								
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	5-48								
PVPU_HV1S1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49								
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	64-94								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS	1051-1078								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-43								
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV)	114-144								
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	28-55								
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS	9-44								
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-44								
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	2-29								
PVS07_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	91-146	199-236							
PVS07_ROTP5	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	91-146	202-236							
PVS07_ROTS1	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	91-146	199-236							
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NS2/VP9	BOVINE ROTAVIRUS (STRAIN UK)	164-201								
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	164-201	217-251							
PVS09_ROTB4	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-29								
PVS09_ROTB5	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-29								
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-29								
PVS09_ROTGA	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN ADRV)	210-237								
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-29								
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	2-29								
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN B37)	2-29								
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	2-29								
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	2-29								
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-29								
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-29								
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	2-29								
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	2-29								
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-29								
PVS09_ROTP2	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	2-29								
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	2-29								
PVS09_ROTS1	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-29								
PVS10_ROTBS	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	125-152								
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	113-140								
PVS11_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	13-40	114-145							
PVS11_ROTBV	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN VMOU)	13-40	114-145							
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	31-60								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS11_ROTHS	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	13-40	111-145							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	13-40	111-145							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145								
PVS11_ROTRA	MINOR OUTER CAPSID PROTEIN	RABBIT ROTAVIRUS (STRAIN ALABAMA)	118-145								
PVS11_ROTSI	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-146								
PVSH_MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS	9-46								
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	12-41								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	9-41								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-46								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	9-46								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	12-41								
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	9-41								
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	12-41								
PVS11_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	26-63	71-122	127-168	222-259					
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	4-104	130-193							
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	4-52	75-104	112-160						
PVS12_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	350-384								
PVS13_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	289-316								
PVS1S_REOVD	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	90-117								
PVS1S_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	50-77								
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	124-158								
PVT3_SFVKA	PROTEIN T3	SHOPE FIBROMA VIRUS (STRAIN KASZA)	250-277								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PVTER_HI5V6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	176-201								
PVTER_HSVII	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	710-737								
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	394-421								
PVTPJ_TTVIV	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN VTJ)	169-196								
PVTPX_TTVI	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	169-196								
PVV_PI4HA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PY101_SSVI	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	25-65								
PY108_SSVI	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-61								
PY119_SSVI	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-78								
PY11K_TYDVA	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	53-87								
PY13K_NPVAC	HYPOTH 13.1 KD IN 39 KD 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	85-112								
PY13K_SSVI	HYPOTHETICAL 13.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	59-86								
PY14K_SSVI	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39								
PY16K_NPVAC	HYPOTH 16 IN 39 KD PROTEIN 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	80-107								
PY16K_SSVI	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	77-111								
PY17K_SSVI	HYPOTHETICAL 17.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	9-36	119-153							
PY18K_MSVN	HYPOTHETICAL 17.7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	34-61								
PY18K_MSVS	HYPOTHETICAL 17.2 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	34-61								
PY20K_SSVI	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	76-103								
PY28K_SSVI	HYPOTHETICAL 28.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	93-164								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	118-148								
PY31K_SSVI	HYPOTHETICAL 31.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	24-97								
PY32K_SSVI	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	233-267								
PY38K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-184								
PY3_SOCMV	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-149								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94								
PY85K_SSVI	HYPOTHETICAL 85.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-121	546-573	658-700						
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	13-40								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	74-108	152-179	184-218						
PYB05_FOWPM	HYPOTHETICAL BAMHI-ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	62-89								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-197	214-241							

PCGENE	107s178s4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	11-38								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	128-167								
PYB13_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	87-116								
PYBLJ_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	161-188								
PYDH1_HSVS7	HYPOTH 24.1 KD IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	52-82								
PYDH1_HSVSC	HYPOTH 28.7 KD IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PYDH4_HSVSC	HYPOTH 9.9 KD IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	8-35								
PYF26_FOWPI	HYPOTHETICAL 25.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	170-204								
PYF30_FOWPI	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	37-64	95-126	144-171						
PYH22_VACCV	HYPOTH 21.7 KD HINDIII-C PRO	VACCINIA VIRUS (STRAIN WR)	31-58	179-206							
PYHR3_VACCV	HYPOTH HOST RANGE 27.4 KD PRO	VACCINIA VIRUS (STRAIN WR)	90-121								
PYKR2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYKR4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	47-86								
PYL15_ADE41	HYPOTH 12.4 KD IN 33 KD REGION	HUMAN ADENOVIRUS TYPE 41	27-54								
PYLR3_EBV	HYPOTHETICAL BLRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	94-143								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	35-76								
PYOR3_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	64-94								
PYORJ_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	65-95								
PYORJ_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	92-119								
PYOR5_ADEG1	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS)	23-57								
PYORA_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	15-42								
PYORL_TTV1	HYPOTHETICAL 26.8 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-31								
PYORQ_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	4-40								
PYORW_TTV1	HYPOTHETICAL 12.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	44-71								
PYP12_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	44-71								
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	59-101	106-157							
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	51-101	106-157							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	58-107	197-231							
PYP46_RTBV	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	58-107	197-231							
PYP46_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	44-71								
PYP63_NPVAC	HYPOTH PRO P6.5 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	325-352								
PYP63_NPVOP	HYPOTH 40.0 KD IN P6.5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	116-153								
PYPOH_NPVAC	HYPOTH 23.6 KD IN POLYHEDRIN 5'REGIO	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	5-32								
PYPOL_IPNVN	HYPOTHETICAL 17.0 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	8-57	59-96	156-183						
PYQ3_AMEPV	HYPOTHETICAL PROTEIN IN TK 3'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS	208-235								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	223-257	268-299							
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	141-168								
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	404-441								
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	10-45								
PYRP2_IRV6	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS	7-34								
PYVAG_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-112								
PYVAH_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-77								
PYVDB_VACCC	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-77								
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	20-50								
PYVDH_VACCV	HYPOTHETICAL 7.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	10-44								
PYVGB_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	152-179								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)									

TABLE VII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

(PREFERRED VIRAL SEQUENCES)

PCGENE	107s17864	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	453-480								
PENV_MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	517-544								
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	605-632								
PMYC_AVMJ	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	333-366	375-402							
PMYC_AVMD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MH	333-367	376-403							
PMYC_AVMC	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	333-367	376-403							
VL1_FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-65								
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454								
PRIR1_HSVB1	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 24)	90-119								
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	447-474								
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-44	544-603	631-695						
PENV_BIV37	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	573-632	660-724						
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-333								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-333								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-333								
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	304-333								
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-333								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-333								
PHEMA_PI3B	HEMAGGLUTONIN-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PRPOP_PI3B	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	34-61	255-282	285-314						
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-142	207-241	459-497						
PVMAT_PI3B	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PRPOP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-133								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-65	154-202	216-241	442-469	486-531				
PVMAJ_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	124-153								
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	219-246								
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	154-202	216-241	444-471	488-533				
PVGLG_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	93-121								
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	154-202	216-241	444-471	488-533				
PENV_MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	510-539								
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	660-687	253-289	310-366	526-584	627-654				
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	242-269	636-685							
PVE3_CRPVK	PROBABLE E3 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	5-34								
VL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	331-381								
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1858-1885	2890-2935	2988-3016						
PPOLG_DEN16	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	1344-1371	1858-1885	2908-2935	2982-3016	3117-3147				
PPOLG_DEN17	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	1344-1371	1858-1885	2485-3518	2908-2935	2982-3016	3117-3147			
PPOLG_DEN1J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	1344-1371	1858-1885	2908-2935	3117-3147	3346-3373				
PPOLG_DEN1P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159S1)	1344-1371	1858-1885	2905-2932	2979-3013	3114-3144	3343-3370			
PPOLG_DEN1T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	1134-1161	1448-1475							
PPOLG_DEN1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	837-864	1542-1569	1857-1884	2494-2521	2980-3014	3343-3373			
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2885-2910	3937-3011	3342-3369						
PDPOL_10BDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S1)	5-39								
PDPOL_10BDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL_10BDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S11)	5-39	304-331							
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1344-1371	1876-1903					
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	542-569						
PUL11_EBV	HYPOTHETICAL PROTEIN BBLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-42								
PUL33_EBV	PROB DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	185-212	987-814							
PUL67_EBV	HYPOTHETICAL PROTEIN BXLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	409-436								
PUL93_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	168-196							
PVCAP_EB	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVGL3_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95-122	631-658							
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	569-576	619-648							
PVGP8_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149								

PCGENE	107a178a4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PYKR3_EBV	HYPOTHETICAL BKRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYKR4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYLR1_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-56								
PYZL3_EBV	HYPOTHETICAL BZLF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	152-179								
PBZLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	55-82								
PLMP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-173								
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	298-331								
PLMP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-175								
PLMP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJI)	148-175								
PUL32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	145-175								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	443-470	934-961							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABI)	443-470	934-961							
PATI2_HSVEB	ALPHA TRANS-IND FACTOR 82 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	294-331								
PATIN_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	253-289								
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	321-348							
PRIR1_HSVEB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1205-1232						
PUL06_HSVEB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	207-286								
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL37_HSVEB	GENE 33 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	715-749	987-1014							
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	193-220	943-970							
PVG03_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
VIMP_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	107-134								
PVP26_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	933-960							
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	312-339								
PUL47_HSVE4	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	190-217								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	616-643							
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	351-398								
PDUT_HSVE4	DEOXYU 5'-TRIPHOSPHONUCLEOHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PVE3_PAPVE	PROBABLE E3 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	130-150								
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	650 680	722-749							
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-473								
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	639 668	720-747							
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640 679	721-748							
PENV_FLVC6	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	509-538								
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420								
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-420								
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN A/GLASGOW-1)	490-519								
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-01)	510-539								
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516								
PENV_MLVFS	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE ST)	533-557								
PENV_MLVF1	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	533-553								
PENV_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-211)	533-553								
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-201	533-564							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	396-442	447-474							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOLO_HPAVI	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	201-237	1021-1048	1117-1149	1454-1481					
PPOLO_HPAVI	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	201-237	1021-1048	1117-1149	1454-1481					
PPOLO_HPAVI	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	201-237	1021-1048	1117-1149	1454-1481					
PPOLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	201-237								
PPOLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	182-218								
PPOLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	201-237	1021-1048	1103-1149						
PPOLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	201-237	1021-1048	1103-1149						
PPOLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	201-237	1021-1048	1103-1149						
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	458-483								
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	441-470								
PPOLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	703-729								
PPOLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	703-729	1045-1072							
PPOLO_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	703-729	1045-1072							
PPOLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	374-401	2089-2116							
PPOLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	1049-1076	2089-2116							
PPOLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	703-729	1045-1072							
PPOLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	378-405	703-729	1045-1072						
PPOLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	703-729	1045-1072							
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVD1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	18-41	106-133							
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	18-41	106-133							
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVT1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	319-346	349-376							
PPOLN_HEVMX	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	319-346	349-376							
PPOLN_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	319-346	349-376							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	318-345	348-375							
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39								
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328								
PIE63_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	248-275								
PIE68_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40-69								
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1613-1710							
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586-613								
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-143								
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	470-497	853-884							
PUL42_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	331-358								
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	488-515								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PATU_HSV11	ALPHA TRANS-IND FACTOR 78 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	308-335								
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	488-515								
PATU2_HSV1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	308-335								
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148								
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	102-129	228-262	567-611	962-993	1098-1131	1661-1688	1884-1911		
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	62-89	160-403							
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	208-235								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	223-257	268-299							
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	141-168								
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	404-441								
PP100_HSV6U	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	81-108	189-216	688-715	785-812					
PUL87_HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	516-561	739-768							
PUL95_HSV6U	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	73-100	105-134							
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	136-170	355-382							
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	176-203								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-143								

PCGENE	1078178e4	All Viruses (no Bacteriophages)									
TBLNAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN II)	625-652								
PDUT_HSVSA	DEOXYU F-TRIPHOSPH NUCLEOTIDOHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN II)	179-211								
PHEL1_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN II)	418-449								
PICI0_HSVSA	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN II)	58-85	482-522							
PIE68_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	48-78								
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN II)	340-386								
PRIR1_HSVSA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN II)	324-351								
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	520-607	672-700	777-814	846-898	949-986	990-1017	1467-1493	2102-2135	
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN II)	120-147								
PUL06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	15-42	302-358	368-402						
PUL19_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	34-61	204-231	362-389						
PUL30_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	208-235								
PUL37_HSVSA	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	31-65	685-737							
PUL52_HSVSA	PROB DNA REP GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	130-157								
PUL53_HSVSA	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	9-36								
PUL87_HSVSA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	582-609								
PUL92_HSVSA	HYPOTHETICAL GENE 21 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	92-122								
PUNG_HSVSA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN II)	135-176								
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	169-199								
PVG45_HSVSA	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	138-165								
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	160-194								
PVG52_HSVSA	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	47-74								
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN II)	388-415								
PVMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	80-107								
PVP23_HSVSA	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN II)	2-29								
PVP26_HSVSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN II)	48-75								
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN II)	205-232	344-372							
PVP75_HSVSA	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN II)	181-208	929-977							
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	333-368	512-539							
PCGH2_HSVSA	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN II)	127-154								
PYDIII_HSVS7	HYPOTH 24 5 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	161-188								
PYDIII_HSVSC	HYPOTH 38 7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-80								
PYDII4_HSVSC	HYPOTH 9 9 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-80								
PENV_MLVHO	ENV POLYPROTEIN	HOMFULV MURINE LEUKEMIA VIRUS	510-540								
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-780								
PIC18_HCMVA	PROB PROC & TRANSPORT PRO UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324								
PIR05_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	22-49								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-161								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-62								
PRIR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	623-649								
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2229							
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PUL20_HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-148	448-485	763-790	802-853					
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-186								
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-101								
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92								
PUL73_HCMVA	UL73 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-33								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-39								
PUL93_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-53	334-381							
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71								
PULA4_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-31	443-477							
PUL89_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-78								

PCGENE	Notation	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	90-120							
PUL00_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-47							
PUL99_HCMVA	HYPOTHETICAL PROTEIN UL129	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-188							
PUL14_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-218							
PUL11_HCMVA	MEMBRANE PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13-46	397-424	440-467	151-178				
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102-136	378-397						
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	63-111							
PVGLI_HCMVA	GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451							
PVTEB_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-404							
PDNB1_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-221							
PV36K_HCMVE	36 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	30-48	397-424	433-460	151-178				
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-133							
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	544-592	610-682	790-825					
PENV_HV1A2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	91-118							
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	218-245	610-661						
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	1-11							
PVPU_HV1A2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	1-48							
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 AND IIIB10 ISOLATES)	1-48							
PENV_HV1B1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 AND IIIB10 ISOLATES)	545-594	611-661	791-838					
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 AND IIIB10 ISOLATES)	208-257	611-673						
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	190-237	611-673	786-833					
PENV_HV1B8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	540-589	616-678						
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	11-48							
PENV_HV1BN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	187-204	187-365	187-390	628-679	787-815			
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-49							
PENV_HV1BR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	540-589	616-668	796-823					
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	190-237	611-673						
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	1-48							
PENV_HV1C4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	397-424	537-606	643-695	603-815				
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-30							
PENV_HV1EL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	535-586	606-673	543-591	628-680				
PNEF_HV1EL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119							
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-264	674-660						
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33							
PENV_HV1H2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	543-594	611-681	791-838					
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	218-265	630-661	931-951					
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	5-48							
PENV_HV1H3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	543-594	611-681	791-838					
PENV_HV1HI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	536-587	536-605	643-694	802-829				
PGAG_HV1I1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HII ISOLATE)	81-118							
PVPU_HV1I1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HII ISOLATE)	3-39							
PENV_HV1IR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	536-583	622-675	781-811					
PPOL_HV1IR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	233-249	624-665						
PVPU_HV1IR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	22-49							
PENV_HV1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	547-591	633-707	194-826					
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	217-264	676-710	819-860					
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	1-32							
PENV_HV1MF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	543-592	639-681	789-816					
PENV_HV1MN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	541-590	567-595	632-684	791-819				
PGAG_HV1MN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	187-218							
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	221-268	671-664						
PENV_HV1ND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	549-598	536-583	631-673	781-811				
PNEF_HV1ND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-119							
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-264	674-660						
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33							
PENV_HV1NS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-1 ISOLATE)	328-360							
PPOL_HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-1 ISOLATE)	218-245	633-661						
PENV_HV1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	544-591	616-704	789-820					

PCGENE	[07a178a4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	218-245	620-661							
PENV_HV1PV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	545-594	631-683	791-818						
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	210-257	617-673							
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	1-48								
PENV_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	280-307	331-378	554-602	640-692	800-832				
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	217-244	619-660							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	61-89								
PENV_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	336-365	545-593	631-683						
PENV_HV1SI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	536-585	622-674	782-809					
PVPU_HV1SI	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	23-49								
PENV_HV1S3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	541-589	627-679	787-815						
PENV_HV1KB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	274-301	535-596	637-677	776-824					
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE U	217-244	583-640	619-660						
PENV_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	338-365	545-593	631 683	791-818					
PENV_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	334-361	536-584	622-674	782-809					
PENV_HV1Z8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	266-307	575-601	634-676	791-828					
PENV_HV1Z2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	335-398	542-591	628 680	790-830					
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	217-244	619-660							
PENV_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-297								
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-297	545-593	630 682	792-822					
PNEF_HV1Z6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PENV_HV1ZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	545-594	627-666	791-823						
PENV_HV2BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	532-591	621-648	653-697					
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-562								
PENV_HV2CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	534-593	623-650	655-699						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	491-562								
PENV_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	61-88	523-550	555-582	644-688					
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600								
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	491-568								
PENV_HV2GI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	60-87	524-551	556-583	613-640	645-693				
PPOL_HV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562								
PENV_HV2NZ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	61-88	524 551	556-583	613-640	643-689				
PGAG_HV2NZ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	88-115								
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	491-539								
PENV_HV2RO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	58-85	533-592	622-698						
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-561								
PENV_HV2SB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	557-584	614-671							
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	473-562								
PENV_HV2ST	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	559-586	648-692					
PGAG_HV2ST	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582								
PENV_HV2S2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24 IC#2)	442-476	527-554	559 586	648-682					
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE2_HPV11	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	157-184	334-361							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	312-342							
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	66-93								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	333-360								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	75-107								
VL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-186								
VL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
PVE1_HPV1A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								

PCGENE	10Jul1804	All Viruses (no bacteriophage)									
ENTRY	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVE3_HPV34	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 34	119-191								
PVE4_HPV32	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 32	35-103								
PVE6_HPV31	PROBABLE E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	69-96								
PVE6_HPV31	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	100-201								
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	104-311								
PVE3_HPV31	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	19-46								
VL1_HPV31	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	131-192	127-134							
PVE3_HPV33	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-54								
PVE4_HPV33	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	101-110								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	7-34	123-137							
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	71-107								
PVE6_HPV39	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	55-89								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	61-97								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	119-146								
PVE6_HPV41	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	103-132								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	415-441								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	25-59								
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	71-102								
PVE6_HPV45	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	146-171								
PVE1_HPV47	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	17-51	148-175	276-301						
PVE1_HPV47	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	17-51								
PVE3_HPV51	PROBABLE E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	107-138								
PVE4_HPV51	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	111-184								
PVE3_HPV51	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	13-39								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46								
VL1_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	31-48								
PVE1_HPV52	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 52	166-193								
PVE3_HPV52	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 52	2-36	109-136							
PVE3_HPV58	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	45-71								
VL1_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	17-51								
PVE2_HPV58	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	101-129								
PVE4_HPV58	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	11-41								
PVE1_HPV58	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	10-40								
PVE3A_HPV6B	PROBABLE E3A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	10-40								
PVE3A_HPV6C	PROBABLE E3A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	156-182								
VL1_HPV6B	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	31-103								
PVE6_HPVME	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	84-111	214-241	373-416						
PRUP_PIIIB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	337-404	415-442							
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	84-111	214-241	373-416						
PRUP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	107-134	210-244							
PVGLY_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	84-111	144-171	373-416						
PRUP_PIIHE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CH-1943)	41-75								
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CH-1943)	84-111	232-263	373-416						
PRUP_PIIHO	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-371)	84-111	144-171	373-416						
PHEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	19-110	144-191							
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	337-404	414-488							
PRUP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS	167-194	232-256							
PVGLY_PIIH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS	90-117	141-175	218-266	483-518					
PVGLY_PIIHO	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	90-117	141-175	218-266	483-518					
PRUPL_PIIHT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	123-149	1364-1398	1687-1721	1901-1946					
PRUPP_PIIHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	167-194	235-256							
PVGLY_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	90-117	141-175	218-266	483-518					
PVMAT_PIIHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	94-123								
PHEMA_PIIHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN AUS/12481/74)	27-61								
PNCAP_PIIHA	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN NOI 47885)	376-401								
PHEMA_PIIHN	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN NOI 47885)	27-61								
PHEMA_PIIHH	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN NOI 47885)	52-86	116-143	603-638	1081-1123	1994-2036	2113-2143			
PRUPL_PIIHH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN NOI 47885)	116-144	169-199							
PRUPP_PIIHH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN NOI 47885)									

PCGENE	8976178x6	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_PIJH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	185-182	207-241	453-497						
PVMAT_PIJH4	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVNSC_PIJH4	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-99								
PHEMA_PIJHV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/81)	27-61								
PHEMA_PIJHT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	27-76								
PHEMA_PIJHU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	27-70								
PHEMA_PIJHX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/77)	27-61								
PHEMA_PIJHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/6641/79)	27-61								
PRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PVV_PI4HA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192	210-237	667-694	788-815	1007-1034	1138-1165	1453-1480	1776-1803	2062-2089
PRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65	154-202	213-243	488-518					
PVMA2_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	126-151								
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-248								
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD5837)	66-107								
PVGLG_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD6190)	243-273								
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	38-65	154-202	213-243	442-471	488-518				
PRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	154-202	216-243	444-471	488-515				
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31	76-108	112-141						
PRPP_HRSVI	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65	154-201	442-471	488-515					
PVGLG_HRSVI	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	61-91								
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 8/60)	66-93								
PENV_HTL1C	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	343-376								
PPOL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	674-713								
PENV_HTL1M	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	343-376								
PENV_HTL1A	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	343-376								
PPOL_HTL1A	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-713								
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-370								
PDPOL_HSV11	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	328-366	710-737							
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	491-518								
PVG07_HSV11	HYPOTH GENE 7 HOMOLOG PRO	ICTALURID HERPESVIRUS 1	71-98								
PVG17_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	177-204								
PVG18_HSV11	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG22_HSV11	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	373-400	581-622	668-705	766-824					
PVG24_HSV11	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1	31-58								
PVG28_HSV11	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	253-290	487-528							
PVG34_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1	95-122								
PVG37_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	651-678	1088-1115							
PVG46_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-169	346-373	897-924	973-1007					
PVG51_HSV11	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG63_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	550-584								
PVG64_HSV11	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1313-1351								
PVG66_HSV11	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	363-406								
PVG67_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1343-1369								
PVG68_HSV11	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG73_HSV11	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	710-737								

FCGENE	IDENTIFIED	AN Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	19-36	194-221	388-415						
PHEMA_IA0SW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/57)	388-415								
PHEMA_IA0JC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	171-198								
PVNS1_IA0LA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	378-405								
PVNUC_IA0MA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/MUNICH/56/79)	116-146								
PRPT1_IA0AN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-198								
PVNS1_IA0AN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	378-405								
PVNUC_IA0AN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	34-51	171-433							
PHEMA_IA0AN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	47-81								
PNRAM_IA0DA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/1/78)	378-405								
PVNUC_IA0BA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/1/78)	381-431								
PHEMA_IA0UD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/KAIDO/1/77)	333-360								
PRPT1_IA0UD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/KAIDO/1/77)	378-405								
PVNUC_IA0UD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/KAIDO/1/77)	378-405								
PVNUC_IA0AL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	33-64								
PNRAM_IA0A0	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/1/81)	9-36								
PHEMA_IA0A0	HEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/1/81)	381-431								
PHEMA_IA0KA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VALABAI/1/75)	31-58	182-441	494-538						
PHEMA_IA0KG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	111-198								
PVNS1_IA0KG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	378-405								
PVNUC_IA0KG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	168-195								
PVNS1_IA0KJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/3/14)	168-195								
PHEMA_IA0KP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	398-426								
PVNUC_IA0KP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	378-405								
PHEMA_IA0KQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83(H5N2))	398-426								
PHEMA_IA0KV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	119-146	184-441							
PNRAM_IA0KI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	10-37	10-51							
PRPT1_IA0CB	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	333-360								
PVNS1_IA0CB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	171-198								
PHEMA_IA0AI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	381-431								
PNRAM_IA0AI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	31-81								
PHEMA_IA0A1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	39-56	418-438							
PHEMA_IA0A4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	423-453	499-543							
PHEMA_IA0AJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	171-198								
PVNS1_IA0AJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	387-433								
PHEMA_IA0AJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	378-405								
PVNUC_IA0AU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/75/80)	378-405								
PVNUC_IA0BE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	378-405								
PHEMA_IA0CE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	181-431								
PVNUC_IA0CE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-405								
PVNUC_IA0D1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/)	378-405								
PHEMA_IA0E1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	31-55	402-433	506-533						
PVNUC_IA0E1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/83)	378-405								
PNRAM_IA0GE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	31-81								
PHEMA_IA0H7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/10/81)	171-437								
PHEMA_IA0H8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/103/83)	171-437								
PHEMA_IA0H9	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/106)	171-437								
PHEMA_IA0HB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/171)	171-437								
PHEMA_IA0HH	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/183)	171-433								
PHEMA_IA0HJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/186)	171-433								
PRPT1_IA0HO	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/183)	119-146								
PHEMA_IA0HS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOK/KAIDO/441)	171-433								
PVNUC_IA0IR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/1/81)	415-445								
PHEMA_IA0IR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/1/81)	11-38								
PHEMA_IA0MA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/LAMANITOBA/1/53)	378-405								
PVNUC_IA0MA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/LAMANITOBA/1/53)	31-58								
PHEMA_IA0MJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/518/76)	381-431								
PHEMA_IA0MJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/518/76)	378-405								
PVNUC_IA0MJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/518/76)									

PCGENE	107a178a4	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/132/78)	21-55								
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	381-451								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-405								
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-55								
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	387-453								
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	378-405								
PVNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	378-405								
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77)	40-67	387-453							
PHEMA_IAEN6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/878/69)	24-51								
PHEMA_IAJAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	386-452								
PHEMA_IAJC0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAJC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	29-56	194-221	388-457						
PHEMA_IAJC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/73)	29-56	194-221	388-457						
PNRAM_IAJC0	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/1/74)	197-224	386-413							
PHEMA_IAJDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAJF0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEDLEAU/76)	386-452								
PVNUC_IAJU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	378-405								
PNRAM_IAJK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	16-76	164-400						
PHEMA_IAJK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	386-452								
PHEMA_IAJK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	386-452								
PHEMA_IAJL0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/86)	29-56	194-221	388-457						
PHEMA_IAJL0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	29-56	194-221	388-457						
PRRP2_IAJL0	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	119-146								
PVNUC_IAJL0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	378-405								
PHEMA_IAJM1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	386-452								
PVNUC_IAJM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	378-405								
PHEMA_IAJN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-56	194-221	388-457						
PHEMA_IAJN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	386-452								
PHEMA_IAJP8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	29-56	194-221	388-457						
PRRP2_IAJP8	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	331-361	480-507							
PVNUC_IAJP8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	378-405								
PHEMA_IAJR0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	386-452								
PHEMA_IAJS4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	386-452								
PHEMA_IAJS9	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-56	194-221	388-457						
PHEMA_IAJT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	386-452								
PRRP2_IAJT6	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	119-146								
PVNUC_IAJT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	378-405								
PHEMA_IAJT0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	386-455								
PHEMA_IAJU8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	386-452								
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	378-405								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	171-198								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	378-405								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	378-405								
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	197-221	384-442							
PRRP2_IAFPR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	378-405								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PHEMA_IAGR8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	381-451								
PVNUC_IAGR8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-405								
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	504-531								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	378-405								
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/181S/79)	378-405								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1814/78)	378-405								
PVNUC_IAGUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	378-405								
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	505-532								
PRRP2_IAGU2	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	119-146								

PCGENE	10711364	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA2	AREA1	AREA2
TITLE	PROTEIN	VIRUS							
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILDHALL/TYLAND/90/77)	378-405						
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILDHALL/ASSACHUSETTS/26/80)	378-405						
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILDHALL/MINNESOTA/49/90)	378-405						
PHEMA_IAHAR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HARBIN/1/80)	39-56						
PVNUC_IAHBC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	378-405						
PVNUC_IAHOI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1968)	378-405						
PVNUC_IAHOJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1973)	378-405						
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	396-333						
PHEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	39-56	433-478					
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	38-81						
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	378-405						
PRDP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	693-801						
PRDP2_IAKOR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	119-146						
PRDP2_IALE1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146						
PRDP2_IALE1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146						
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	111-174						
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	39-56	433-478					
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	38-81						
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	378-405						
PVNS1_IALM6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	131-188						
PHEMA_IALM6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	380-430						
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	378-405						
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	385-455						
PRDP1_IAMAN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	119-146						
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	378-405						
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	187-451						
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	40-67						
PNRAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H3N2))	38-81						
PHEMA_IAME3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	187-451						
PHEMA_IAME5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	187-451						
PHEMA_IAMON	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	24-51						
PVNUC_IAMON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	378-405						
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/76/76)	187-451						
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	187-451						
PRDP1_IANT6	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	693-801						
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	378-405						
PVNUC_IAOHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/73)	378-405						
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	10-81						
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	378-405						
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/AINE/73/84)	385-455						
PRDP2_IAPR8	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	119-146						
PVNS1_IAPR1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	131-188						
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	39-56	433-478					
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	38-81						
PRDP1_IAPUE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	693-801						
PRDP2_IAPUE	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	119-146						
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-405						
PHEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/7/78)	24-51						
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	181-451						
PRDP1_IARUD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	693-801						
PRDP2_IARUD	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	119-146						
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	378-405						
PNRAM_IASEE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SEAL/ASSACHUSETTS/1/80)	38-81						
PVNUC_IASEE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/ASSACHUSETTS/1/80)	378-405						
PHEMA_IASI3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SICHUAN/2/87)	181-451						
PHEMA_IASW2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWEATWATER/AUSTRALIA/72)	39-56	160-187	506-547				
PVNUC_IASW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWEATWATER/AUSTRALIA/72)	378-405						
PRDP1_IASIN	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	693-801						
PRDP2_IASIN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	119-146						

PCGENE	107a178:4	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IA3N	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	378-405								
PHEMA_IA3TA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/5156/85)	119-146	184-443							
PVNUC_IA3Z9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	378 405								
PVNUC_IA3Z4I	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	378 405								
PVNUC_IA3ZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	378-405								
PHEMA_IA3ZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	40-67	187-451							
PVNUC_IA3ZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	378-405								
PVNUC_IA3ZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	378-405								
PHEMA_IA3ZHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	331-437								
PRRP3_IA3ZHJ	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	119 146								
PVNUC_IA3ZHJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	378-405								
PVNUC_IA3ZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	378 405								
PVNUC_IA3ZHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	378-405								
PHEMA_IA3ZHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	331-437								
PRRP3_IA3ZH2	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	119-146								
PHEMA_IA3ZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	418 478	506 547							
PRRP3_IA3ZI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119 146								
PVNUC_IA3Z1I	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	378 405								
PVNUC_IA3Z1J	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	378 405								
PVNUC_IA3ZIJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	378 405								
PVNUC_IA3ZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	378 405								
PVNUC_IA3ZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/3/79)	378 405								
PVNUC_IA3ZJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	378 405								
PVNUC_IA3ZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	378 405								
PVNUC_IA3ZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	378 405								
PVNUC_IA3ZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	378 405								
PVNUC_IA3ZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	378 405								
PHEMA_IA3ZNJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	418-478	506-547							
PVNUC_IA3ZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/75)	378-405								
PVNUC_IA3ZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	378 405								
PRRP3_IA3ZTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	487 514								
PVNUC_IA3ZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	378-405								
PRRP3_IA3ZTF	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	119-146								
PHEMA_IA3ZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKKEL/1/84)	387-453								
PVNUC_IA3ZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	378-405								
PVNUC_IA3ZW3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	378-405								
PHEMA_IATAI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	29-56								
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	378-405								
PHEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	21-55								
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	49-82								
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	378-403								
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/73)	171-198								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/73)	378-405								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	378 405								
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETTLEFIELD/GILL17/1492-B/82)	171-198								
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/61)	171-198								
PHEMA_IATKI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	418-445								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	378-405								
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	331-451								
PRRP3_IATKM	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	119-146								
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	426-454	493-539							
PHEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	507-534								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	378-405								
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	32-62	194-221	381-422						
PVNS2_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	87-114								
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/66A)	419-449	500-536							
PHEMA_IAUNO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UNICORN/303/77)	40-67	187-451							

PCGENE	ENTRY	All Viruses (no bacteriophage)								
		VIRUS								
FLUA_BAMBE	PROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MD/1977)	131-198							
PVNS1_BAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/MD/1977)	131-401							
PVNUC_BAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MD/1977)	39-76	411-418						
PIEMA_BAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USS/1977)	56-81							
PRAM_BAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USS/1977)	131-198							
PVNS1_BAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USS/1977)	131-401							
PVNUC_BAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USS/1977)	41-58	188-414						
PIEMA_BAVIT	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/1975)	119-146	337-364						
PUUP3_BAVIT	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/1975)	131-401							
PVNUC_BAVIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/1975)	39-58							
PRAM_BAWSN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WALEA/AIAIN-5/1964)	131-401							
PVNUC_BAWSN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WALEA/PACIFIC OCEAN/1976)	131-401							
PVNUC_BAWSP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1933)	424-433							
PIEMA_BAWSL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1933)	16-41							
PRAM_BAWSL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1933)	119-146							
PUUP3_BAWSL	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1933)	131-401							
PVNUC_BAWSL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1933)	131-401							
PVNUC_BAWS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/1933/1981)	39-58							
PIEMA_BAZA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ZAIRE/ENG/1980)	157-184							
PUUP1_BBAC	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1966 [COLD-ADAPTED])	2-33	472-509						
PUUP1_BBAC	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1966 [COLD-ADAPTED])	2-33							
PUUP1_BBAD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1966 [WILD-TYPE])	164-194							
PUUP1_BBAD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1966 [WILD-TYPE])	2-33	472-509						
PIEMA_BBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BELLING/1/81)	400-431	518-545						
PIEMA_BBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BOONVI/81)	190-221	339-371						
PIEMA_BBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	191-218	337-381						
PIEMA_BBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	191-218	338-373						
PIEMA_BBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	199-230	338-382						
PRAM_BBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-33							
PVNS1_BBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78							
PIEMA_BBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	189-220	338-372						
PIEMA_BBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/5/88)	191-224	337-376						
PIEMA_BBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	191-218	337-381						
PVNS1_BBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	131-198							
PIEMA_BBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	198-229	337-381						
PUUP3_BBSI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	157-184							
PIEMA_BBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	191-223	430-474						
PIEMA_BBVA	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/87)	191-224	418-481						
PIEMA_BBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/88)	191-224	417-476						
PVNS1_BBYA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/73)	51-78							
PUUP1_BCBE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	169-196							
PVNUC_BNCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	495-531							
PIEMA_BNCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	416-463	431-478					
PIEMA_BNCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	481-519							
PIEMA_BNCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	481-519							
PIEMA_BNCIT	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ITY/83)	481-518							
PUUP1_BNCJI	RNA-DIRECTED RNA POL SUB P1	INFLUENZA C VIRUS (STRAIN C/JI/79)	169-196							
PVMAT_BNCJI	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JI/79)	131-185							
PVNS1_BNCJI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/JI/79)	11-38							
PIEMA_BNCJI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1966)	486-532							
PIEMA_BNCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/1982)	481-518							
PIEMA_BNCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	481-518							
PIEMA_BNCNA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/NAR/82)	481-518							
PIEMA_BNCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/1/81)	481-519							
PIEMA_BNCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/2/81)	481-519							
PIEMA_BNCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/3/81)	481-519							
PIEMA_BNCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	481-519							
PIEMA_BNCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/1/81)	481-519							

PCGENE	107a178a4	All Viruses (no bacteriophages)									
TITLE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PENV_MLVKJ	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-120	352-379							
PENV_MCFF	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-512								
PENV_MCFFJ	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-3)	488-515								
PENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	502-543								
PDNBJ_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584 618								
PICIB_MCMVS	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	661-691								
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475							
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288								
PVE2_PCPVI	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	267-294	327-361							
PVE5_PCPVI	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	33-63								
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	805-832							
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217							
PDNBJ_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	435 462	522-559							
PPOLG_IDAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	207-241	1025-1052	1115-1192						
PPOLG_IDAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	201 237								
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	269 310	561 588	597 619	652-679	697-724				
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	547-574	637-671						
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1266 ISOLATE)	45-72								
PENV_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	270-301	566-593	597 624	658 685	703-730				
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	436-463	482-516	642 669						
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3B3 ISOLATE)	71-98								
PENV_SIVS4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SAD14 ISOLATE)	281-308	553-612	642 669	691-718					
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SAD14 ISOLATE)	88-115								
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SAD14 ISOLATE)	496-523								
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	257-291	336-372	548 603	656-708					
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	477 507								
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	76-137								
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	478-515								
VIF_SIVAJ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	2-36								
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	8-35	138-185	589 630	784 816					
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	237-264	618-670							
PENV_SIVK6K	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	553 606								
PGAG_SIVK6K	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	88-115								
PPOL_SIVK6K	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	533-560								
PENV_SIVK6L	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6B ISOLATE)	549 608								
PENV_SIVM1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	520 150	530-609	671-715						
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	533-560								
PENV_SIVMJ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	156-315	337-389							
PENV_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	286-313	554-595	646-722						
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	88-115								
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	499-526								
PGAG_SIVMS	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115								
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	3-30	268-298	590-617	651-678					
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	637-691								
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68								
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON PFIZER VIRUS	422-470								
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON PFIZER VIRUS	574 612	670-697							
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	222 260								
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109 139								
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728							
PRIR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146								
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609							
PUL14_VZVD	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PUL21_VZVD	GENE 18 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380 407								

REGION	DESCRIPTION	AB Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	112-139								
PUL34_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-134	185-312	310-340	836-1001					
PUL35_VZVD	GENE 35 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-134								
PUL36_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	130-364								
PUL46_VZVD	GENE 46 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	139-146	112-349							
PUL47_VZVD	PROB DNA REP GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	101-177								
PUL53_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	195-222								
PVGLC_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-208	495-522							
PVP40_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	196-431								
PVTER_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	195-222								
PVGLC_VZVS	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	111-126								
PDPOL_WHVI	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	190-331								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-342	190-331							
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-341	189-330							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-342	190-331							
PDPOL_WHV11	DNA POLYMERASE										

TABLE VIII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL PROCARYOTIC PROTEINS

PCGENE	107:1784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA1	AREA2
TLE NAME	PROTEIN	ORGANISM	83-110	240-298	355-382	618-672	746-838	1168-1202			
P120K_RICCI	120 KD SURFACE-EXPOSED PROTEIN	RICKETTSIA RICKETTSII	67-94								
P17K_RICTY	17 KD ANTIGEN PRECURSOR	RICKETTSIA TYPHI	241-268	460-487	607-634	754-781	829-856	904-931	1220-1234	1344-1371	1723-1750
P190K_RICCI	190 KD ANTIGEN PRECURSOR (CELL SURFACE)	RICKETTSIA RICKETTSII	2065-2096	2131-2168							
P22KD_DESMO	22.6 KD PROTEIN	DESULFUROCOCCUS MOBILIS	25-52	59-89	120-147						
P40KD_VIBAN	40 KD PROTEIN PRECURSOR	VIBRIO ANGUILLARUM	153-196								
P60DM_ECOLI	60 KD INNER-MEMBRANE PROTEIN	ESCHERICHIA COLI	511-538								
P60DM_PROMI	60 KD INNER-MEMBRANE PROTEIN	PROTEUS MIRABILIS	14-41								
P65KD_ZYMMO	65 KD PROTEIN	ZYMOMONAS MOBILIS	95-122	444-524							
P6PGD_BACSU	PROB 6-PHOSPHOGLUCONATE DEHYDROGENASE	BACILLUS SUBTILIS	24-51	218-246							
P6PGD_ECOLI	6-PHOSPHOGLUCONATE DEHYDROGENASE	ESCHERICHIA COLI	205-232								
P6PGD_SALTY	6-PHOSPHOGLUCONATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	205-232								
PAACA_STAAU	6'-AMINOGLYCOSIDE N-ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	450-477								
PAAT_BACSP	ASPARTATE AMINOTRANSFERASE	BACILLUS SP	146-173	185-212							
PAAT_ECOLI	ASPARTATE AMINOTRANSFERASE	ESCHERICHIA COLI	351-378								
PABC_ECOLI	ABC PROTEIN	ESCHERICHIA COLI	176-203		209-233						
PABIC_LACLA	ABORTIVE PHAGE RESISTANCE PROTEIN ABIC	LACTOCOCCUS LACTIS	85-126	170-204							
PACCR_AGRTU	TRANSCRUPTIONAL REPRESSOR ACCR	AGROBACTERIUM TUMEFACIENS	127-154								
PACEA_ECOLI	ISOCITRATE LYASE	ESCHERICHIA COLI	398-432								
PACON_BACSU	ACONITATE HYDRATASE	BACILLUS SUBTILIS	48-75								
PACON_ECOLI	ACONITATE HYDRATASE	ESCHERICHIA COLI	41-68	613-640							
PACOR_ALCEU	ACONITATE HYDRATASE	ALCALIGENES EUTROPHUS	85-112								
PACP_ECOLI	ACYL CARRIER PROTEIN	ESCHERICHIA COLI	4-31								
PACRA_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN A PRECURSOR	ESCHERICHIA COLI	213-247								
PACRB_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN B	ESCHERICHIA COLI	520-551								
PACRF_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN F	ESCHERICHIA COLI	312-350	726-753							
PACT1_STRCO	PUTATIVE KETOACYL REDUCTASE	STREPTOMYCES COELICOLOR	157-184								
PACTA_LISMO	ACTIN-ASSEMBLY INDUCING PROTEIN PRECURSOR	LISTERIA MONOCYTOGENES	237-264	576-603							
PACVS_NOCLA	ACV SYNTHETASE	NOCARDIA LACTAMDURANS	3129-3163								
PADAA_BACSU	METPHOSTRUESTER-DNA ALKYLTRANSFERASE	BACILLUS SUBTILIS	136-170								
PADDA_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT A	BACILLUS SUBTILIS	398-425	454-481	522-556	1005-1032					
PADDB_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT B	BACILLUS SUBTILIS	257-284	870-903	943-977						
PADHI_CLOAB	NADPH-DEPENDENT BUTANOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	284-311								
PADHA_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE A	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHB_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE B	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHE_CLOAB	ALCOHOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	653-680	779-806							
PADHE_ECOLI	ALCOHOL DEHYDROGENASE	ESCHERICHIA COLI	271-298								
PADRY_ECOLI	PUTATIVE REGULATORY PROTEIN ADIY	ESCHERICHIA COLI	45-72								
PADP1_MYCGE	140 KD ADHESIN PRECURSOR	MYCOPLASMA GENITALIUM	90-131	697-724	923-950	990-1017	1169-1199	1383-1414			
PADP1_MYCPN	ADHESIN P1 PRECURSOR	MYCOPLASMA PNEUMONIAE	1553-1584								
PADT_RICPR	ADP,ATP CARRIER PROTEIN	RICKETTSIA PROWAZEKII	276-307								
PAERA_AERHY	AEROLYSIN PRECURSOR	AEROMONAS HYDROPHILA	278-305								
PAGAL_STRMU	ALPHA-GALACTOSIDASE	STREPTOCOCCUS MUTANS	419-483	597-633							
PAGAA_PSEAT	BETA-AGARASE PRECURSOR	PSEUDOMONAS ATLANTICA	26-53								
PAGR_STAAU	ACCESSORY GENE REGULATOR PROTEIN	STAPHYLOCOCCUS AUREUS	129-159	163-192							
PAI_YEREN	ATTACH INVASION PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	19-46								
PAK1H_ECOLI	ASPARTOKINASE I	ESCHERICHIA COLI	3-30	466-493	501-530						
PAK2H_ECOLI	ASPARTOKINASE II	ESCHERICHIA COLI	51-78	608-635							
PAK3_BACSU	ASPARTATE KINASE II ALPHA AND BETA SUBUNITS	BACILLUS SUBTILIS	266-312								
PAKAB_CORGL	ASPARTATE KINASE ALPHA AND BETA SUBUNITS	CORYNEBACTERIUM GLUTAMICUM	5-32								
PALF_ECOLI	FRUCTOSE-BISPHOSPHATE ALDOLASE	ESCHERICHIA COLI	286-316								
PALGB_PSEAE	ALGINATE BIOSYN TRANSL REG PROTEIN ALGB	PSEUDOMONAS AERUGINOSA	160-194								
PALGE_PSEAE	ALGINATE PRODUCTION PROTEIN ALGE PRECURSOR	PSEUDOMONAS AERUGINOSA	349-376								
PALGP_PSEAE	TRANSCRUPTIONAL REGULATORY PROTEIN ALGP	PSEUDOMONAS AERUGINOSA	81-115								
PALKB_PSEOL	ALKANE-1 MONOOXYGENASE	PSEUDOMONAS OLEOVORANS	115-142								
PALKT_PSEOL	RUBREDOXIN-NAD(+) REDUCTASE	PSEUDOMONAS OLEOVORANS	138-172	338-365							
PALR3_ECOLI	ALANINE RACEMASE, CATABOLIC PRECURSOR	ESCHERICHIA COLI	9-36								

PGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PALR_BACST	ALANINE RACEMASE	BACILLUS STEAROTHERMOPHILUS	326-353								
PALR_BACSU	ALANINE RACEMASE	BACILLUS SUBTILIS	119-146								
PALS1_BACSU	ALS OPERON REGULATORY PROTEIN	BACILLUS SUBTILIS	153-187								
PALY3_BACSP	AUTOLYSIN PRECURSOR	BACILLUS SP	147-191								
PALY3_BACSU	AUTOLYSIN PRECURSOR	BACILLUS SUBTILIS	244-271								
PALY3_STAAU	AUTOLYSIN	STAPHYLOCOCCUS AUREUS	233-264	297-338	446-473						
PAMA_STRPN	AMIA PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	72-99								
PAMID_PSECL	AMIDASE	PSEUDOMONAS CHLORORAPHIS	187-214								
PANGE_STRPN	OLIGOPEPTIDE TRANSPORT PROTEIN AMIE	STREPTOCOCCUS PNEUMONIAE	111-138	199-226							
PANPA_ECOLI	AMINOPEPTIDASE M	ESCHERICHIA COLI	231-258								
PANPC_SERMA	BETA-LACTAMASE PRECURSOR	SERRATIA MARCESCENS	3-47	72-99							
PANPL_RICTR	CYTOSOL AMINOPEPTIDASE	RICKETTSIA PROWAZEKII	655-682								
PANPN_ECOLI	AMINOPEPTIDASE N	ESCHERICHIA COLI	110-137								
PANPP_ECOLI	X-PRO AMINOPEPTIDASE	ESCHERICHIA COLI	281-308								
PAMPT_THEAQ	AMINOPEPTIDASE T	THERMUS AQUATICUS	507-534								
PAMY1_DICTH	ALPHA-AMYLASE 1	DICTYOGLOMUS THERMOPHILUM	131-178	507-534							
PAMY2_DICTH	ALPHA-AMYLASE 2	DICTYOGLOMUS THERMOPHILUM	70-104								
PAMY3_SALTY	CYTOPLASMIC ALPHA-AMYLASE	SALMONELLA TYPHIMURIUM	280-307								
PAMY3_DICTH	ALPHA-AMYLASE 3	DICTYOGLOMUS THERMOPHILUM	61-88								
PAMYB_BACCI	BETA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	60-87	266-293	1143-1184						
PAMYB_BACPO	BETA-AMYLASE	BACILLUS POLYMYXA	269-296	378-405	459-486						
PAMYB_CLOTU	BETA-AMYLASE, THERMOPHILIC PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	101-148	480-510							
PAMYO_CLOSP	GLUCOAMYLASE PRECURSOR	CLOSTRIDIUM SP	426-453								
PAMYM_BACST	MALTOGENIC ALPHA-AMYLASE PRECURSOR	BACILLUS STEAROTHERMOPHILUS	210-237	435-465	615-642						
PAMY_BACSS	RAW-STARCH-DIGESTING AMYLASE	BACILLUS SP	415-453								
PAMY_AERHY	ALPHA-AMYLASE PRECURSOR	AEROMONAS HYDROPHILA	166-193								
PAMY_ALTHA	ALPHA-AMYLASE PRECURSOR	ALTEROMONAS HALOPLANKTIS	102-136								
PAMY_BACAM	ALPHA-AMYLASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	212-239	437-474							
PAMY_BACCI	ALPHA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	61-88	441-482							
PAMY_BACME	ALPHA-AMYLASE PRECURSOR	BACILLUS MEGATERIUM	165-205	281-308							
PAMY_BACSU	ALPHA-AMYLASE PRECURSOR	BACILLUS SUBTILIS	377-418	546-573	579-606	795-822					
PAMY_BUTFI	ALPHA-AMYLASE PRECURSOR	BUTYRIVIBRIO FIBRISOLVENS	283-310								
PAMY_CLOAB	PUTATIVE ALPHA-AMYLASE	CLOSTRIDIUM ACETOBUTYLICUM	431-468	612-642							
PAMY_CLOTU	ALPHA-AMYLASE PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	173-200								
PAMY_STRLM	ALPHA-AMYLASE PRECURSOR	STREPTOMYCES LIMOSUS	232-259								
PANFA_AZOVI	NITROGEN FIXATION PROTEIN ANFA	AZOTOBACTER VINELANDII	93-122								
PANFD_AZOVI	NITROGENASE IRON-IRON PROTEIN ALPHA CHAIN	AZOTOBACTER VINELANDII	369-396								
PANFK_AZOVI	NITROGENASE IRON-IRON PROTEIN BETA CHAIN	AZOTOBACTER VINELANDII	93-120	169-203							
PANGA_VIBAN	ANGR PROTEIN	VIBRIO ANGUILLARUM	31-78								
PAPCB_FREDI	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	37-64	585-615							
PAPCB_SYNPS	PHYCOBILISOME LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	52-79								
PAPCB_SYNY4	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	SYNECHOCYSTIS SP	62-89								
PAPHC_SALTY	ALKYL HYDROPEROXIDE REDUCTASE C22 PROTEIN	SALMONELLA TYPHIMURIUM	478-505								
PAPI_ACHLY	PROTEASE I PRECURSOR	ACHROMOBACTER LYTICUS	118-148								
PAPPC_ECOLI	PROBABLE CYTOCHROME OXIDASE SUBUNIT I	ESCHERICHIA COLI	416-450								
PAPRD_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APRD	PSEUDOMONAS AERUGINOSA	133-193	208-235	247-277						
PAPRE_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APRE	PSEUDOMONAS AERUGINOSA	121-148								
PAPT_ECOLI	ADENINE PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	276-303	347-374	916-982	987-1014	1210-1234	1381-1408			
PAPU_THEET	ALPHA-AMYLASE-PULLULANASE PRECURSOR	THERMOANAEROBACTER ETHANOLICUS	60-87	218-245							
PARCA_MYCAN	ARGININE DEIMINASE	MYCOPLASMA ARGININI	102-150	302-329	399-426						
PARCB_ECOLI	AEROBIC RESPIRATION CONTROL PROTEIN ARCB	ESCHERICHIA COLI	274-301	386-420							
PARCD_PSEAE	PROBABLE ARGININE/ORNITHINE ANTIPORTER	PSEUDOMONAS AERUGINOSA	82-109								
PARGA_ECOLI	AMINO-ACID ACETYLTRANSFERASE	ESCHERICHIA COLI	84-111								
PARGT_ECOLI	LYS-ARG-ORN-BINDING PROTEIN (LAO) PRECURSO	ESCHERICHIA COLI	86-120								
PAROA_STAAU	PHOSPHOSERINE 1-CARBOXYVINYLTRANSFER	STAPHYLOCOCCUS AUREUS	68-95								
PAROC_ECOLI	CHORISMATE SYNTHASE	ESCHERICHIA COLI	68-95								
PAROC_SALTI	CHORISMATE SYNTHASE	SALMONELLA TYPHI	49-76								
PAROD_BACSU	DEHYDROQUINATE DEHYDRATASE	BACILLUS SUBTILIS									

PCGENE	1971178:4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PAROK_ECOLI	SHIKIMATE KINASE I	ESCHERICHIA COLI	84-118							
PARP4_STRPY	IGA RECEPTOR PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	127-157	266-324					
PARP_ECOLI	ARP PROTEIN	ESCHERICHIA COLI	255-282							
PARS_ECOLI	ARSENICAL PUMP-DRIVING ATPASE	ESCHERICHIA COLI	201-238							
PARSA_ECOLI	ARSENICAL PUMP MEMBRANE PROTEIN	ESCHERICHIA COLI	291-318							
PARSB_ECOLI	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS AUREUS	27-71	295-322						
PARSB_STAAU	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS XYLOSUS	27-71	295-322						
PARSR_STAAU	ARSENICAL RESIST OPERON REPRESSOR PROTEIN	STAPHYLOCOCCUS AUREUS	36-93							
PARTA_ECOLI	ARTA PROTEIN	ESCHERICHIA COLI	3-30							
PARTI_ECOLI	TRANSPORT SYSTEM PROTEIN ARTI	ESCHERICHIA COLI	105-132	213-240						
PARTP_ECOLI	TRANSPORT SYSTEM PROTEIN ARTP	ESCHERICHIA COLI	176-206							
PASAI_ENTFA	AGGREGATION SUBSTANCE PRECURSOR	ENTEROCOCCUS FAECALIS	195-234	478-503	799-826	859-896				
PASNA_ECOLI	ASPARTATE--AMMONIA LIGASE	ESCHERICHIA COLI	127-158							
PASNI_ECOLI	ASPARAGINE SYNTHETASE II	ESCHERICHIA COLI	140-177							
PASNC_ECOLI	REGULATORY PROTEIN ASNC	ESCHERICHIA COLI	116-141							
PASPA_BACSU	ASPARTATE AMMONIA-LYASE	BACILLUS SUBTILIS	7-34							
PASPA_ECOLI	ASPARTATE AMMONIA-LYASE	ESCHERICHIA COLI	204-236							
PASPA_SERMA	ASPARTATE AMMONIA-LYASE	SERRATIA MARCESCENS	204-231							
PASPG_BACLI	L-ASPARAGINASE	BACILLUS LICHENIFORMIS	233-288							
PASPO_ERWCH	L-ASPARAGINASE PRECURSOR	ERWINIA CHRYSANTHEMI	188-218							
PASPQ_ACIGL	GLUTAMINASE-ASPARAGINASE	ACINETOBACTER GLUTAMINASIFICANS	46-80							
PASSY_ECOLI	ARGININOSUCCINATE SYNTHASE	ESCHERICHIA COLI	334-381							
PASSY_METBA	ARGININOSUCCINATE SYNTHASE	METHANOSARCINA BARKERI	207-314							
PATBP_STAAU	POTENTIAL ATP-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	41-68	201-245						
PATKA_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE A	ENTEROCOCCUS FAECALIS	41-80	347-374						
PATKB_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE B	ENTEROCOCCUS FAECALIS	280-310	450-477						
PATMB_SALTY	MG(2+) TRANSPORT ATPASE, P-TYPE	SALMONELLA TYPHIMURIUM	501-530							
PATN_SYNPX	ATP SYNTHASE A CHAIN	SYNECHOCOCCUS SP	233-260							
PATN_VIBAL	ATP SYNTHASE A CHAIN	VIBRIO ALGINOLYTICUS	111-38							
PATPA_ANASP	ATP SYNTHASE ALPHA CHAIN	ANABAENA SP	9-36	96-130						
PATPA_BACME	ATP SYNTHASE ALPHA CHAIN	BACILLUS MEGATERIUM	4-36	453-480						
PATPA_ECOLI	ATP SYNTHASE ALPHA CHAIN	ESCHERICHIA COLI	4-36	486-513						
PATPA_ENTFA	ATP SYNTHASE ALPHA CHAIN	ENTEROCOCCUS FAECALIS	4-36	484-511						
PATPA_MYCGA	ATP SYNTHASE ALPHA CHAIN	MYCOPLASMA GALLISEPTICUM	162-409							
PATPA_PROMO	ATP SYNTHASE ALPHA CHAIN	PROPIONIGENIUM MODESTUM	6-36							
PATPA_RHORU	ATP SYNTHASE ALPHA CHAIN	RHODOSPIRILLUM RUBRUM	163-200	439-486						
PATPA_SULAC	ATPASE ALPHA CHAIN	SULFOLOBUS ACIDOCALDARIUS	318-345	562-589						
PATPA_SYN1	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	7-44							
PATPA_SYN6	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	8-45	382-389						
PATPA_SYN7	ATP SYNTHASE ALPHA CHAIN	SYNECHOCYSTIS SP	8-37	454-500						
PATPA_THEP3	ATP SYNTHASE ALPHA CHAIN	THERMOPHILIC BACTERIUM PS-3	9-36							
PATPA_VIBAL	ATP SYNTHASE ALPHA CHAIN	VIBRIO ALGINOLYTICUS	464-513							
PATPB_ANASP	ATP SYNTHASE BETA CHAIN	ANABAENA SP	280-307	370-397						
PATPB_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	163-190	358-385						
PATPB_MYCGA	ATP SYNTHASE BETA CHAIN	MYCOPLASMA GALLISEPTICUM	375-402							
PATPB_RHORU	ATP SYNTHASE BETA CHAIN	RHODOSPIRILLUM RUBRUM	359-386							
PATPB_SULAC	ATPASE BETA CHAIN	SULFOLOBUS ACIDOCALDARIUS	164-191							
PATPB_SYN1	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	381-408							
PATPB_SYN6	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	291-318	381-408						
PATPB_SYN7	ATP SYNTHASE BETA CHAIN	SYNECHOCYSTIS SP	381-408							
PATPD_ANASP	ATP SYNTHASE DELTA CHAIN	ANABAENA SP	109-139	143-170						
PATPD_BACFI	ATP SYNTHASE DELTA CHAIN	BACILLUS FIRMUS	63-90	133-160						
PATPD_BACME	ATP SYNTHASE DELTA CHAIN	BACILLUS MEGATERIUM	132-159							
PATPD_ENTFA	ATP SYNTHASE DELTA CHAIN	ENTEROCOCCUS FAECALIS	14-41							
PATPD_PROMO	ATP SYNTHASE DELTA CHAIN	PROPIONIGENIUM MODESTUM	79-116	118-149						
PATPD_RHOBL	ATP SYNTHASE DELTA CHAIN	RHODOPSEUDOMONAS BLASTICA	123-152							
PATPD_RHORU	ATP SYNTHASE DELTA CHAIN	RHODOSPIRILLUM RUBRUM	119-146							

PCGENE	107a178z4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PATPD_SYNP1	ATP SYNTHASE DELTA CHAIN	SYNECHOCOCCUS SP	100-127								
PATPD_SYNY3	ATP SYNTHASE DELTA CHAIN	SYNECHOCYSTIS SP	113-147								
PATPD_VIBAL	ATP SYNTHASE DELTA CHAIN	VIBRIO ALGINOLYTICUS	110-137								
PATPE_BACFI	ATP SYNTHASE EPSILON CHAIN	BACILLUS FIRMUS	33-80								
PATPE_MYCGA	ATP SYNTHASE EPSILON CHAIN	MYCOPLASMA GALLISEPTICUM	99-126								
PATPE_PROMO	ATP SYNTHASE EPSILON CHAIN	PROPIONIGENIUM MODESTUM	100-127								
PATPE_SYNP1	ATP SYNTHASE EPSILON CHAIN	SYNECHOCOCCUS_SP	72-106								
PATPF_ANASP	ATP SYNTHASE B CHAIN	ANABAENA SP	17-44	51-78	137-164						
PATPF_BACFI	ATP SYNTHASE B CHAIN	BACILLUS FIRMUS	110-131								
PATPF_BACME	ATP SYNTHASE B CHAIN	BACILLUS MEGATERIUM	55-85	122-170							
PATPF_MYCGA	ATP SYNTHASE B CHAIN	MYCOPLASMA GALLISEPTICUM	82-135	170-197							
PATPF_SYNP1	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	15-49	111-159							
PATPF_SYNY6	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	12-39	128-155							
PATPF_THEP3	ATP SYNTHASE B CHAIN PRECURSOR	THERMOPHILIC BACTERIUM PS-3	50-77								
PATPG_ANASP	ATP SYNTHASE GAMMA CHAIN	ANABAENA SP	276-310								
PATPG_ECOLI	ATP SYNTHASE GAMMA CHAIN	ESCHERICHIA COLI	233-283								
PATPG_MYCGA	ATP SYNTHASE GAMMA CHAIN	MYCOPLASMA GALLISEPTICUM	28-62	92-140							
PATPG_RHORU	ATP SYNTHASE GAMMA CHAIN	RHODOSPIRILLUM RUBRUM	270-297								
PATPG_SYNP1	ATP SYNTHASE GAMMA CHAIN	SYNECHOCOCCUS SP	280-307								
PATPG_SYNY3	ATP SYNTHASE GAMMA CHAIN	SYNECHOCYSTIS SP	96-126	280-307							
PATPI_MYCGA	ATP SYNTHASE PROTEIN I	MYCOPLASMA GALLISEPTICUM	133-167								
PATPX_ANASP	ATP SYNTHASE B' CHAIN	ANABAENA SP	129-156								
PATPX_BACFI	ATP SYNTHASE B' CHAIN	BACILLUS FIRMUS	162-189	356-383							
PATPX_RHORU	ATP SYNTHASE B' CHAIN	RHODOSPIRILLUM RUBRUM	40-74								
PATPX_SYNP1	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	57-110	128-155							
PATPX_SYNY6	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	70-100								
PATPX_SYNY3	ATP SYNTHASE B' CHAIN	SYNECHOCYSTIS SP	108-135								
PATPZ_BACME	ATP SYNTHASE PROTEIN I	BACILLUS MEGATERIUM	14-62								
PATPZ_SYNP1	ATP SYNTHASE PROTEIN I	SYNECHOCOCCUS SP	90-131								
PAVB_PSESO	AVIRULENCE B PROTEIN	PSEUDOMONAS SYRINGAE	184-211	233-260							
PBA71_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBA72_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBACH_HALSH	HALORHODOPSIN	HALOBACTERIUM HALOBIUM	145-179								
PBACH_HALSG	HALORHODOPSIN PRECURSOR	HALOBACTERIUM SP	180-214								
PBAES_ECOLI	SENSOR PROTEIN BAES	ESCHERICHIA COLI	152-186								
PBAG_STRAG	IGA FC RECEPTOR PRECURSOR	STREPTOCOCCUS AGALACTIAE	92-119	138-204	267-306	343-385	487-524	562-589	1014-1041		
PBAHG_VITSP	BACTERIAL HEMOGLOBIN	VITREOSCILLA SP	119-146								
PBAIC_EUBSP	BILE ACID-INDUCIBLE OPERON PROTEIN C	EUBACTERIUM SP	423-450								
PBARA_ECOLI	SENSOR PROTEIN BARA	ESCHERICHIA COLI	334-381	425-455							
PBAS5_ECOLI	SENSOR PROTEIN BAS5	ESCHERICHIA COLI	122-156								
PBAT_HALHA	PUTATIVE BACTERIO-OPSIN ACTIVATOR	HALOBACTERIUM HALOBIUM	408-442								
PBAX_ECOLI	BAX PROTEIN	ESCHERICHIA COLI	21-64								
PBCCP_ECOLI	BIOTIN CARBOXYL CARRIER PROTEIN	ESCHERICHIA COLI	6-35								
PBCHH_RHOCA	METHYLTRANSFERASE	RHODOBACTER CAPSULATUS	1000-1032								
PBCHN_RHOCA	PROTOCHLOROPHYLLIDE REDUCTASE 46 KD CHAIN	RHODOBACTER CAPSULATUS	249-276								
PBCN3_CLOPE	BACTERIOCIN BCN3	CLOSTRIDIUM PERFRINGENS	72-99	585-646							
PBCPA_PROAE	BACTERIOCHLOROPHYLL A PROTEIN	PROSTHECOCHLORUS AESTUARII	63-93								
PBCSC_ACEXY	CELLULOSE SYNTHASE OPERON C PROTEIN	ACETOBACTER XYLINUM	131-158	1035-1082							
PBCSD_ACEXY	CELLULOSE SYNTHASE OPERON D PROTEIN	ACETOBACTER XYLINUM	10-37								
PBENA_ACICA	BENZOATE 1,2-DIOXYGENASE ALPHA SUBUNIT	ACINETOBACTER CALCOACETICUS	190-217								
PBETT_ECOLI	HIGH AFFINITY CHOLINE TRANSPORT PROTEIN	ESCHERICHIA COLI	243-270								
PBEXA_HAEIN	BEXA PROTEIN	HAEMOPHILUS INFLUENZAE	23-50								
PBEXC_HAEIN	BEXC PROTEIN	HAEMOPHILUS INFLUENZAE	153-184	226-253							
PBEXD_HAEIN	BEXD PROTEIN	HAEMOPHILUS INFLUENZAE	205-239								
PBFR_NITWI	BACTERIOFERRITIN	NITROBACTER WINOGRADSKYI	8-35								
PBGA3_ECOLI	EVOLVED BETA-GALACTOSIDASE ALPHA-SUBUNIT	ESCHERICHIA COLI	935-985								
PBGAL_BACST	BETA-GALACTOSIDASE	BACILLUS STEAROTHERMOPHILUS	599-633								

PCGENE	107s178s4	Prokaryotic Sequences	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FULLNAME	PROTEIN	ORGANISM									
PBGAL_CLOAB	BETA-GALACTOSIDASE	CLOSTRIDIUM ACETOBUTYLICUM	824-851								
PBGAL_CLOTU	BETA-GALACTOSIDASE	CLOSTRIDIUM THERMOSULFUROGENES	161-191								
PBGAL_KLEPN	BETA-GALACTOSIDASE	KLEBSIELLA PNEUMONIAE	245-272								
PBGAL_LACDE	BETA-GALACTOSIDASE	LACTOBACILLUS DELBRUECKII	305-332								
PBGAL_STRTR	BETA-GALACTOSIDASE	STREPTOCOCCUS THERMOPHILUS	188-215								
PBGAL_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	59-86	179-206							
PBGAM_LEULA	BETA-GALACTOSIDASE SMALL SUBUNIT	LEUCONOSTOC LACTIS	139-166								
PBGAM_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	106-140								
PBGLA_CLOTH	BETA-GLUCOSIDASE A	CLOSTRIDIUM THERMOCELLUM	353-380	418-445							
PBGLB_CLOTH	THERMOSTABLE BETA-GLUCOSIDASE B	CLOSTRIDIUM THERMOCELLUM	339-386	375-409	534-581	631-665					
PBGLR_ECOLI	BETA-GLUCURONIDASE	ESCHERICHIA COLI	464-494	536-563							
PBGLS_AGRSP	BETA-GLUCOSIDASE	AGROBACTERIUM SP	421-448								
PBGLS_BUTFI	BETA-GLUCOSIDASE A	BUTYRIVIBRIO FIBRISOLVENS	85-112	435-462	692-719	738-765					
PBINJ_STAAU	POTENTIAL DNA-INVERTASE BINJ	STAPHYLOCOCCUS AUREUS	60-87								
PBINL_STAAU	TRANSPOSON TN552 RESOLVASE	STAPHYLOCOCCUS AUREUS	163-197								
PBINR_STAAU	DNA-INVERTASE BINR	STAPHYLOCOCCUS AUREUS	163-190								
PBIOA_BACSH	AMINOTRANSFERASE	BACILLUS SPHAERICUS	33-60								
PBIOB_BACSH	BIOTIN SYNTHETASE	BACILLUS SPHAERICUS	145-172								
PBIOB_ECOLI	BIOTIN SYNTHETASE	ESCHERICHIA COLI	130-157								
PBIOD_BACSH	DETHIOBIOTIN SYNTHASE	BACILLUS SPHAERICUS	144-171								
PBLA1_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	91-118	275-303							
PBLA1_HAEIN	BETA-LACTAMASE ROB-1 PRECURSOR	HAEMOPHILUS INFLUENZAE	152-179	204-231							
PBLA2_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	18-47	201-228							
PBLA2_BACSP	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS SP	18-47								
PBLA3_BACCE	BETA-LACTAMASE PRECURSOR, TYPE III	BACILLUS CEREUS	35-83	93-129							
PBLA4_PSEAE	BETA-LACTAMASE PSE-4 PRECURSOR	PSEUDOMONAS AERUGINOSA	19-50								
PBLAB_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	20-46	200-227							
PBLAB_BACFR	BETA-LACTAMASE PRECURSOR, TYPE II	BACTEROIDES FRAGILIS	23-49								
PBLAC_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	93-120	276-303							
PBLAC_BACLI	BETA-LACTAMASE PRECURSOR	BACILLUS LICHENIFORMIS	47-74	86-115							
PBLAC_PROMI	BETA-LACTAMASE PRECURSOR	PROTEUS MIRABILIS	191-221								
PBLAC_PROVU	BETA-LACTAMASE	PROTEUS VULGARIS	4-38	240-267							
PBLAC_STRAL	BETA-LACTAMASE PRECURSOR	STREPTOMYCES ALBUS G	43-70								
PBLAD_KLEPN	BETA-LACTAMASE PRECURSOR	KLEBSIELLA PNEUMONIAE	121-148								
PBLAI_STAAU	PENICILLINASE REPRESSOR	STAPHYLOCOCCUS AUREUS	19-74	99-126							
PBLAO_ECOLI	BETA-LACTAMASE PRECURSOR	ESCHERICHIA COLI	118-166	235-262							
PBLAP_ECOLI	BETA-LACTAMASE PSE-2 PRECURSOR	ESCHERICHIA COLI	155-196								
PBLAR_BACLI	REGULATORY PROTEIN BLAR1	BACILLUS LICHENIFORMIS	129-156	315-552							
PBLAR_STAAU	REGULATORY PROTEIN BLAR1	STAPHYLOCOCCUS AUREUS	87-114	122-161	234-261	281-312	503-539				
PBMP_TREPA	BASIC MEMBRANE PROTEIN PRECURSOR	TREPONEMA PALLIDUM	312-346								
PBMR_BACSU	MULTIDRUG RESISTANCE PROTEIN	BACILLUS SUBTILIS	277-304								
PBNZA_PSEPU	BENZENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PBNZB_PSEPU	BENZENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PBNZD_PSEPU	P4 SUBUNIT	PSEUDOMONAS PUTIDA	179-213								
PBPS2_DESAM	BPS2 PROTEIN	DESULFUROLOBUS AMBIVALENS	157-237	242-290	311-355	391-425	543-573				
PBRAB_PSEAE	CARRIER PROTEIN	PSEUDOMONAS AERUGINOSA	260-287	313-340							
PBRAE_PSEAE	TRANSPORT PROTEIN BRAE	PSEUDOMONAS AERUGINOSA	254-281								
PBRAO_PSEAE	BRAG PROTEIN	PSEUDOMONAS AERUGINOSA	7-34								
PBTUB_ECOLI	VITAMIN B12 RECEPTOR PRECURSOR	ESCHERICHIA COLI	439-466								
PBTUE_ECOLI	VITAMIN B12 TRANSPORT PERIPLASMIC PROTEIN	ESCHERICHIA COLI	6-33								
PBVGA_BORPE	TRANSCRIPTION REGULATOR BVGA	BORDETELLA PERTUSSIS	174-205								
		BORDETELLA BRONCHISEPTICA									
PBVGB_BORPE	PERIPLASMIC PROTEIN BVGB PRECURSOR	BORDETELLA PERTUSSIS	116-143								
PBVGC_BORPE	SENSOR PROTEIN BVGC	BORDETELLA PERTUSSIS	39-66	202-229							
PBVGS_BORBR	VIRULENCE BVGS PROTEIN PRECURSOR	BORDETELLA BRONCHISEPTICA	113-143	341-368	501-531						
PBXA_CLOBO	BOTULINUM NEUROTOXIN TYPE A PRECURSOR	CLOSTRIDIUM BOTULINUM	313-340	686-729	733-762	815-842	851-893	968-995	1159-1207		
PBXB_CLOBO	BOTULINUM NEUROTOXIN TYPE B PRECURSOR	CLOSTRIDIUM BOTULINUM	666-693	720-762	802-832	853-890	1004-1031	1056-1089			

PCGENE	107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PBXC1_CLOBO	BOTULINUM NEUROTOXIN TYPE C1 PRECURSOR	CLOSTRIDIUM BOTULINUM	86-113	314-341	730-773	798-825	850-892				
PBXD_CLOBO	BOTULINUM NEUROTOXIN TYPE D PRECURSOR	CLOSTRIDIUM BOTULINUM	473-500	526-576	727-770	804-831	847-892	906-963	1060-1087		
PBXE_CLOBO	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BOTULINUM	254-291	350-381	704-753	773-811	890-917	992-1019	1115-1149		
PBXE_CLOBU	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BUTYRICUM	254-291	350-381	704-753	774-808	890-917	992-1019	1115-1149		
PBXF_CLOBO	BOTULINUM NEUROTOXIN TYPE F PRECURSOR	CLOSTRIDIUM BOTULINUM	669-710	735-772	892-919	1013-1040	1095-1122	1183-1210			
PC550_MICAE	CYTOCHROME C550	MICROCYSTIS AERUGINOSA	3-30								
PCADA_BACFI	PROBABLE CADMIUM-TRANSPORTING ATPASE	BACILLUS FIRMUS	30-57	100-131	165-192	276-306	533-567				
PCADA_STAAU	PROBABLE CADMIUM-TRANSPORTING ATPASE	STAPHYLOCOCCUS AUREUS	282-309	536-570							
PCADC_ECOLI	TRANSCRIPTIONAL ACTIVATOR CADC	ESCHERICHIA COLI	54-85	412-443							
PCAFA_YERPE	F1 CAPSULE ANCHORING PROTEIN PRECURSOR	YERSINIA PESTIS	203-240	416-457	530-557	619-646					
PCAPA_BACAN	CAPA PROTEIN	BACILLUS ANTHRACIS	108-138								
PCAPB_BACAN	CAPB PROTEIN	BACILLUS ANTHRACIS	36-70								
PCAPP_ANANI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANACYSTIS NIDULANS	248-293								
PCAPP_ANASP	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANABAENA SP	98-125	157-184	687-728						
PCAPP_CORGL	PHOSPHOENOLPYRUVATE CARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	15-42								
PCAPP_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ESCHERICHIA COLI	35-62								
PCARA_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	274-319								
PCARB_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	790-831								
PCARB_ECOLI	CARBAMOYL-PHOSPHATE SYNTHASE LARGE CHAI	ESCHERICHIA COLI	454-481								
PCAT2_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCAT3_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCATA_ACICA	CATECHOL 1,2-DIOXYGENASE	ACINETOBACTER CALCOACETICUS	31-65								
PCATA_BACST	PEROXIDASE / CATALASE	BACILLUS STEAROTHERMOPHILUS	440-470								
PCATA_ECOLI	CATALASE HPI	ESCHERICHIA COLI	579-606								
PCATA_MICLU	CATALASE	MICROCOCCUS LUTEUS	453-480								
PCATA_SALTY	CATALASE HPI	SALMONELLA TYPHIMURIUM	515-542	580-607							
PCATE_ECOLI	CATALASE HPII	ESCHERICHIA COLI	175-202								
PCAT_CAMCO	CHLORAMPHENICOL ACETYLTRANSFERASE	CAMPYLOBACTER COLI	84-111								
PCAT_CLOBU	CHLORAMPHENICOL ACETYLTRANSFERASE	CLOSTRIDIUM BUTYRICUM	88-115								
PCAT_ECOLI	CHLORAMPHENICOL ACETYLTRANSFERASE	ESCHERICHIA COLI	92-119								
PCAT_PROMI	CHLORAMPHENICOL ACETYLTRANSFERASE	PROTEUS MIRABILIS	92-119								
PCAT_STAIN	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS INTERMEDIUS	7-34	87-114							
PCAT_STRAG	CHLORAMPHENICOL ACETYLTRANSFERASE	STREPTOCOCCUS AGALACTIAE	7-34	87-114							
PCBHE_COXBU	CBHE PROTEIN	COXIELLA BURNETII	209-236								
PCBPT_THEVU	CARBOXYPEPTIDASE T PRECURSOR	THERMOACTINOMYCES VULGARIS	48-75								
PCCA_ECOLI	TRNA NUCLEOTIDYLTRANSFERASE	ESCHERICHIA COLI	376-403								
PCCMK_SYNP7	CO2 CONC MECH PROTEIN CCMK	SYNECHOCOCCUS SP	29-56								
PCCMM_SYNP7	CO2 CONC MECH PROTEIN CCMM	SYNECHOCOCCUS SP	212-256	331-372	445-486						
PCDAS_THEET	CYCLOMALTODEXTRINASE	THERMOANAEROBACTER ETHANOLICUS	305-332								
PCDGI_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	439-466	616-643							
PCDGI2_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	210-251	436-466	615-642						
PCDGT_BACCI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS CIRCULANS	217-244	442-472	594-651						
PCDGT_BACLI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS LICHENIFORMIS	217-244	442-472	594-647						
PCDGT_BACOH	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS OHBENSIS	430-471								
PCDGT_BACS0	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	615-642						
PCDGT_BACS1	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	409-471								
PCDGT_BACS3	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	614-641						
PCDGT_BACSP	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-465	615-642						
PCDGT_BACSS	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	217-244	442-472	594-651						
PCDGT_BACST	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS STEAROTHERMOPHILUS	586-646								
PCDGT_KLEPN	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	KLEBSIELLA PNEUMONIAE	212-239								
PCEA1_ECOLI	COLICIN E1 PROTEIN	ESCHERICHIA COLI	44-71	285-326							
PCEA1_SHISO	COLICIN E1* PROTEIN	SHIGELLA SONNEI	44-71	284-325	413-440						
PCEA2_ECOLI	COLICIN E2	ESCHERICHIA COLI	334-368								
PCEA3_ECOLI	COLICIN E3	ESCHERICHIA COLI	334-368								
PCEA6_ECOLI	COLICIN E6	ESCHERICHIA COLI	334-368								
PCEAB_ECOLI	COLICIN B	ESCHERICHIA COLI	283-341								

PCGENE	IDENTIFIER	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCEAD_ECOLI	COLICIN D	ESCHERICHIA COLI	284-311								
PCEAM_ECOLI	COLICIN M	ESCHERICHIA COLI	178-227								
PCEAN_ECOLI	COLICIN N	ESCHERICHIA COLI	119-146	173-200							
PCEA_CITFR	COLICIN A	CITROBACTER FREUNDII	228-258								
PCEFD_STRCL	ISOPENICILLIN N EPIMERASE	STREPTOMYCES CLAVULIGERUS	370-397								
PCEIA_ECOLI	COLICIN IA PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCEIB_ECOLI	COLICIN IB PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCELA_ACIEY	UTP URIDYLYLTRANSFERASE	ACETOBACTER XYLINUM	39-89								
PCELA_ECOLI	PROTEIN CELA	ESCHERICHIA COLI	76-103								
PCFAA_ECOLI	CFA/I FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	27-58								
PCFAC_ECOLI	CFA/I FIMBRIAL SUBUNIT C PRECURSOR	ESCHERICHIA COLI	138-187	388-436	561-595						
PCFAD_ECOLI	CFA/I FIMBRIAL SUBUNIT D	ESCHERICHIA COLI	133-160								
PCFAE_ECOLI	CFA/I FIMBRIAL SUBUNIT E	ESCHERICHIA COLI	180-207	244-271							
PCH10_ACTPS	10 KD CHAPERONIN	ACTINOBACILLUS PLEUROPNEUMONIAE SYMBIOTIC BACTERIUM	37-95								
PCH10_BACSU	10 KD CHAPERONIN	BACILLUS SUBTILIS	66-93								
PCH10_CHLTR	10 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	64-91								
PCH10_ECOLI	10 KD CHAPERONIN	ESCHERICHIA COLI	57-84								
PCH10_HAEDU	10 KD CHAPERONIN	HAEMOPHILUS DUCREYI	68-95								
PCH10_LEGMI	10 KD CHAPERONIN	LEGIONELLA MICDADEI	57-84								
PCH10_RICTS	10 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	65-92								
PCH10_THEFJ	10 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	66-93								
PCH60_ACTPS	60 KD CHAPERONIN	ACTINOBACILLUS PLEUROPNEUMONIAE SYMBIOTIC BACTERIUM	341-382								
PCH60_AGRTU	60 KD CHAPERONIN	AGROBACTERIUM TUMEFACIENS	117-163	339-370	425-466						
PCH60_AMOPS	60 KD CHAPERONIN	AMOEBA PROTEUS SYMBIOTIC BACTERIUM	299-333								
PCH60_BACSU	60 KD CHAPERONIN	BACILLUS SUBTILIS	298-332	337-364							
PCH60_BORBU	60 KD CHAPERONIN	BORRELIA BURGDORFERI	123-163	299-368							
PCH60_BRUAB	60 KD CHAPERONIN	BRUCELLA ABORTUS	117-144	339-366							
PCH60_CHLPN	60 KD CHAPERONIN	CHLAMYDIA PNEUMONIAE	4-31								
PCH60_CHLTR	60 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	4-31								
PCH60_CHRVI	60 KD CHAPERONIN	CHROMATIUM VINOSUM	300-327								
PCH60_CLOAB	60 KD CHAPERONIN	CLOSTRIDIUM ACETOBUTYLICUM	238-332	337-364	455-482						
PCH60_CLOPE	60 KD CHAPERONIN	CLOSTRIDIUM PERFRINGENS	337-368	417-444							
PCH60_COXBU	60 KD CHAPERONIN	COXIELLA BURNETII	300-327	348-382							
PCH60_HAEDU	60 KD CHAPERONIN	HAEMOPHILUS DUCREYI	339-366	417-444							
PCH60_LEGMI	60 KD CHAPERONIN	LEGIONELLA MICDADEI	299-333								
PCH60_LEGPN	60 KD CHAPERONIN	LEGIONELLA PNEUMOPHILA	298-332	432-479							
PCH60_MYCLE	60 KD CHAPERONIN	MYCOBACTERIUM LEPRAE	123-152	236-263	337-364						
PCH60_MYCTU	60 KD CHAPERONIN	MYCOBACTERIUM TUBERCULOSIS & BOVIS	123-152	337-364							
PCH60_PSEAE	60 KD CHAPERONIN	PSEUDOMONAS AERUGINOSA	339-366								
PCH60_RHILV	60 KD CHAPERONIN	RHIZOBIUM LEGUMINOSARUM	117-163	322-370	425-466						
PCH60_RICTS	60 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	103-130	293-336	360-394						
PCH60_SYNP7	60 KD CHAPERONIN	SYNECHOCOCCUS SP	308-335	337-380							
PCH60_SYNY3	60 KD CHAPERONIN	SYNECHOCYSTIS SP	338-365	455-489							
PCH60_THEFJ	60 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	337-364								
PCH60_STRAL	60 KD CHAPERONIN 2	STREPTOMYCES ALBUS G	116-148	337-364							
PCHB_VIBHA	N,N'-DIACETYLCHITOBIASE PRECURSOR	VIBRIO HARVEYI	21-48	772-799							
PCHEA_BACSU	CHEMOTAXIS PROTEIN CHEA	BACILLUS SUBTILIS	373-400	590-617							
PCHEA_ECOLI	CHEMOTAXIS PROTEIN CHEA	ESCHERICHIA COLI	236-286								
PCHEA_SALTY	CHEMOTAXIS PROTEIN CHEA	SALMONELLA TYPHIMURIUM	162-197								
PCHER_BACSU	CHEMOTAXIS PROTEIN METHYLTRANSFERASE	BACILLUS SUBTILIS	124-151								
PCHEW_ECOLI	PURINE-BINDING CHEMOTAXIS PROTEIN	ESCHERICHIA COLI	68-115								
PCHEW_SALTY	PURINE-BINDING CHEMOTAXIS PROTEIN	SALMONELLA TYPHIMURIUM	88-115								
PCHEY_ECOLI	CHEMOTAXIS PROTEIN CHEY	ESCHERICHIA COLI	22-49								
PCHEY_SALTY	CHEMOTAXIS PROTEIN CHEY	SALMONELLA TYPHIMURIUM	22-49								
PCHI1_BACCI	CHITINASE A1 PRECURSOR	BACILLUS CIRCULANS	491-518	566-593							
PCHIA_ALTSO	CHITINASE A PRECURSOR	ALTEROMONAS SP	245-272								
PCHIA_SERMA	CHITINASE A PRECURSOR	SERRATIA MARCESCENS	146-173								

PCGENE	107:178:4	Prokaryotic Sequences								
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCHLD_BACCI	CHITINASE D PRECURSOR	BACILLUS CIRCULANS	102-161	189-216							
PCHIT_SACER	CHITINASE	SACCHAROPOLYSPORA ERYTHRAEA	92-119								
PCHIT_STRPL	CHITINASE 63 PRECURSOR	STREPTOMYCES PLICATUS	250-284								
PCHMU_BACSU	CHORISMATE MUTASE	BACILLUS SUBTILIS	3-37								
PCHOD_BREST	CHOLESTEROL OXIDASE PRECURSOR	BREVIBACTERIUM STEROLICUM	263-290								
PCHTA_VIBCH	CHOLERA ENTEROTOXIN, A CHAIN PRECURSOR	VIBRIO CHOLERAE	79-106								
PCHVA_AGRTU	BETA-(1-->2)GLUCAN EXPORT PROTEIN	AGROBACTERIUM TUMEFACIENS	4-31	181-208							
PCHVE_AGRTU	RECEPTOR PROTEIN CHVE PRECURSOR	AGROBACTERIUM TUMEFACIENS	100-127								
PCIR1_CITFR	CITROLYSIN PROTEIN 1	CITROBACTER FREUNDII	435-462								
PCIRA_ECOLI	COLICIN I RECEPTOR PRECURSOR	ESCHERICHIA COLI	146-173								
PCISA_BACSU	PUTATIVE DNA RECOMBINASE	BACILLUS SUBTILIS	378-405								
PCISY_ACIAN	CITRATE SYNTHASE	ACINETOBACTER ANITRATUM	143-170								
PCISY_BACCO	CITRATE SYNTHASE	BACILLUS COAGULANS	24-51								
PCITA_SALTY	CITRATE-PROTON SYMPORT	SALMONELLA TYPHIMURIUM	154-181								
PCITN_KLEPN	CITRATE-SODIUM SYMPORT	KLEBSIELLA PNEUMONIAE	194-221								
PCITN_SALDU	CITRATE-SODIUM SYMPORT	SALMONELLA DUBLIN	194-221								
PCITN_SALPU	CITRATE-SODIUM SYMPORT	SALMONELLA PULLORUM	194-221								
PCLCA_PSEPU	CHLOROCATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS PUTIDA	13-36								
PCLD1_ECOLI	CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	133-167								
PCLD2_ECOLI	CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	178-212	250-277							
PCLD_SALTY	CHAIN LENGTH DETERMINANT PROTEIN	SALMONELLA TYPHIMURIUM	96-127	151-212							
PCLOS_CLOHI	ALPHA-CLOSTRIPAIN PRECURSOR	CLOSTRIDIUM HISTOLYTICUM	30-58	497-524							
PCLPA_ECOLI	ATP-BINDING SUBUNIT CLPA	ESCHERICHIA COLI	655-695								
PCLPA_RHOBL	CLPA HOMOLOG PROTEIN	RHODOPSEUDOMONAS BLASTICA	439-466								
PCLPB_BACNO	CLPB HOMOLOG PROTEIN	BACTEROIDES NODOSUS	116-157	442-476	558-595						
PCLPB_ECOLI	CLPB PROTEIN	ESCHERICHIA COLI	444-489	563-590							
PCLPX_AZOVI	CLPX HOMOLOG PROTEIN	AZOTOBACTER VINELANDII	215-242	332-359							
PCLPX_ECOLI	ATP-BINDING SUBUNIT CLPX	ESCHERICHIA COLI	255-282								
PCN16_ECOLI	2',3'-CYCLIC-NUC 2'-PHOSPHODIESTERASE PRECURS	ESCHERICHIA COLI	50-77								
PCODA_ECOLI	CYTOSINE DEAMINASE	ESCHERICHIA COLI	102-129								
PCOM1_BACSU	A COMPETENCE PROTEIN 1	BACILLUS SUBTILIS	108-135	186-213							
PCOMQ_BACSU	COMPETENCE REGULATORY PROTEIN	BACILLUS SUBTILIS	154-239								
PCOP6_STAAU	COP-6 PROTEIN	STAPHYLOCOCCUS AUREUS	7-53								
PCOPB_PSESM	COPPER RESISTANCE PROTEIN B PRECURSOR	PSEUDOMONAS SYRINGAE	140-167								
PCORA_ECOLI	MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	ESCHERICHIA COLI	134-161								
PCORA_SALTY	MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	SALMONELLA TYPHIMURIUM	134-161								
PCOTE_BACSU	SPORE COAT PROTEIN E	BACILLUS SUBTILIS	42-92								
PCOX1_BRAJA	CYTOCHROME C OXIDASE POLYPEPTIDE I	BRADYRHIZOBIUM JAPONICUM	380-407								
PCOX1_PARDE	CYTOCHROME C OXIDASE POLYPEPTIDE I	PARACOCCUS DENITRIFICANS	383-410								
PCOX1_RHOSH	CYTOCHROME C OXIDASE POLYPEPTIDE I	RHODOBACTER SPHAEROIDES	396-423								
PCOXX_BACFI	OXIDASE ASSEMBLY FACTOR	BACILLUS FIRMUS	36-63								
PCOXX_BACSU	OXIDASE ASSEMBLY FACTOR	BACILLUS SUBTILIS	49-76								
PCPPB_NEIGO	CRYPTIC PLASMID PROTEIN B	NEISSERIA GONORRHOEAE	72-99	165-209							
PCPSB_ECOLI	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	ESCHERICHIA COLI	309-336								
PCPSB_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	311-338								
PCPXA_ECOLI	SENSOR PROTEIN CPXA	ESCHERICHIA COLI	254-281								
PCPXG_STRSQ	CYTOCHROME P450 105C1	STREPTOMYCES SP	157-184								
PCPXJ_SACER	6-DEOXYERYTHRONOLIDE B (DEB) HYDROXYLASE	SACCHAROPOLYSPORA ERYTHRAEA	233-260								
PCPXM_BACSU	CYTOCHROME P450 109	BACILLUS SUBTILIS	240-283								
PCPXN_ANASP	PROBABLE CYTOCHROME P450	ANABAENA SP	98-125								
PCR27_BACTI	27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187								
PCR27_BACTM	27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187								
PCR41_BACSH	1 9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308								
PCR42_BACSH	1 9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308								
PCR43_BACSH	41 9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308								
PCR70_BACTD	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	207-234	252-279	429-463						
PCR70_BACTO	75 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	57-84	125-159	427-464						

PCGENE	Protein/Gene	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
GILENAME	PROTEIN	ORGANISM	199-226	244-271	421-455						
PCR70_BACTT	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-615						
PCR71_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	74-111	183-414							
PCR72_BACTI	72 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-593						
PCR73_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	308-335	502-529							
PCR77_BACTI	77 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	103-130								
PCREC_ECOLI	SENSOR PROTEIN CREC	ESCHERICHIA COLI	94-121								
PCRED_ECOLI	INNER MEMBRANE PROTEIN CRED	ESCHERICHIA COLI &	26-53	127-154							
PCR_ECOLI	CATABOLITE GENE ACTIVATOR	SHIGELLA FLEXNERI									
PCR_SALTY	CATABOLITE GENE ACTIVATOR	SALMONELLA TYPHIMURIUM	26-53	127-154							
		KLEBSIELLA AEROGENES									
PCRTI_ERWHE	PHYTOENE DEHYDROGENASE	ERWINIA HERBICOLA	231-258								
PCRTI_RHOCA	PHYTOENE DEHYDROGENASE	RHODOBACTER CAPSULATUS	389-416								
PCRTI_RHOCA	CRTI PROTEIN	RHODOBACTER CAPSULATUS	133-160	334-361	431-458						
PCRYB_BACTA	132 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	721-755	875-902							
PCRYB_BACTB	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	730-771	865-892	1053-1080						
PCRYB_BACTE	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYB_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	218-252	701-728	775-802						
PCRYB_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1053-1080						
PCRYB_BACTS	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYT_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	730-771	865-892	1053-1080						
PCRYT_BACTE	134 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779	899-926							
PCRYT_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	354-384	701-728	775-802					
PCRYT_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892							
PCRYT_BACTS	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYU_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	700-727	774-801						
PCRYU_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	738-772	866-893	1054-1081						
PCRYU_BACTK	131 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1053-1080						
PCRYV_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	110-151	745-772	819-846						
PCRYV_BACTI	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYV_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779								
PCRYW_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	608-659	662-696	892-919						
PCRYW_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-119	227-254	601-632	783-817	917-964				
PCRYX_BACTK	139 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	42-69	226-253	590-617	744-778					
PCS31_ECOLI	CS1 PILI SYNTHESIS 60 KD PROTEIN	ESCHERICHIA COLI	90-117	154-181	208-242						
PCS33_ECOLI	CS3 PILI SYNTHESIS 48 KD PROTEIN	ESCHERICHIA COLI	30-47	74-108							
PCS34_ECOLI	CS3 PILI SYNTHESIS 33 KD PROTEIN	ESCHERICHIA COLI	256-283	584-611							
PCS0_HALHA	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM HALOBIUM	143-170	237-271							
PCS0_HALVO	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM VOLCANII	59-107								
PCS0_METTE	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS FERVIDUS	59-107								
PCS0_METSC	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS SOCIABILIS	25-56								
PCS0B_ECOLI	CS1 FIMBRIAL SUBUNIT B PRECURSOR	ESCHERICHIA COLI	118-145								
PCTFA_CLOAB	COA-TRANSFERASE SUBUNIT A	CLOSTRIDIUM ACETOBUTYLICUM	174-208								
PCTFB_CLOAB	COA-TRANSFERASE SUBUNIT B	CLOSTRIDIUM ACETOBUTYLICUM	132-193								
PCTRB_NEIME	INNER-MEMBRANE PROTEIN CTRB	NEISSERIA MENINGITIDIS	78-115	124-151	160-194	217-251					
PCTX_PSEAE	CYTOTOXIN PRECURSOR	PSEUDOMONAS AERUGINOSA	104-138	161-219							
PCVAA_ECOLI	COLICIN V SECRETION PROTEIN CVAA	ESCHERICHIA COLI	151-178								
PCVAB_ECOLI	COLICIN V SECRETION PROTEIN CVAB	ESCHERICHIA COLI	197-224	411-438	1010-1044						
PCWPM_BACBR	MIDDLE CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	178-216	560-587	947-988						
PCWPO_BACBR	OUTER CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	48-75	632-659	962-996						
PCYAA_BORPE	ADENYLATE CYCLASE PRECURSOR	BORDETELLA PERTUSSIS	343-387	593-620							
PCYAA_YEREN	ADENYLATE CYCLASE	YERSINIA INTERMEDIA	541-568								
PCYAB_BORPE	CYAB PROTEIN	BORDETELLA PERTUSSIS	178-212								
PCYAD_BORPE	CYAD PROTEIN	BORDETELLA PERTUSSIS	313-340								
PCYAE_BORPE	CYAE PROTEIN	BORDETELLA PERTUSSIS	18-45								
PCYB_RHOCA	CYTOCHROME B	RHODOBACTER CAPSULATUS	18-45								
PCYDD_ECOLI	TRANSPORT PROTEIN CYDD	ESCHERICHIA COLI	3-30	382-409							
PCYF_MOSSP	APOCYTOCHROME F PRECURSOR	NOSTOC SP	209-243								

PCGENE	107x178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCYMO_ACISP	CYCLOHEXANONE MONOOXYGENASE	ACINETOBACTER SP	419-471								
PCYNT_SYNP7	CARBONIC ANHYDRASE	SYNECHOCOCCUS SP	170-200								
PCYNX_ECOLI	CYNX PROTEIN	ESCHERICHIA COLI	33-80								
PCYOB_ECOLI	CYTOCHROME O UBIQUINOL OXIDASE SUBUNIT I	ESCHERICHIA COLI	31-58								
PCYPH_SYNP7	PEPTIDYL-PROLYL CIS-TRANS ISOMERASE	SYNECHOCOCCUS SP	107-141								
PCYSA_ECOLI	SULFATE PERMEASE A PROTEIN	ESCHERICHIA COLI	164-191								
PCYSB_ECOLI	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	3-30								
PCYSB_SALTY	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	SALMONELLA TYPHIMURIUM	3-30								
PCYSE_ECOLI	SERINE ACETYLTRANSFERASE	ESCHERICHIA COLI	164-191								
PCYSE_SALTY	SERINE ACETYLTRANSFERASE	SALMONELLA TYPHIMURIUM	164-191								
PCYSO_ECOLI	SIROHEM SYNTHASE	ESCHERICHIA COLI	405-432								
PCYSO_SALTY	SIROHEM SYNTHASE	SALMONELLA TYPHIMURIUM	405-432								
PCYSN_ECOLI	SULFATE ADENYLATE TRANSFERASE SUBUNIT 1	ESCHERICHIA COLI	64-91								
PCYSW_ECOLI	SULFATE PERMEASE W PROTEIN	ESCHERICHIA COLI	201-238								
PCYSW_SYNP7	SULFATE PERMEASE W PROTEIN	SYNECHOCOCCUS SP	211-238								
PCZCB_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCB	ALCALIGENES EUTROPHUS	241-268	283-320	364-391						
PCZCD_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCD	ALCALIGENES EUTROPHUS	139-169								
PDACB_BACSU	PENICILLIN-BINDING PROTEIN 5* PRECURSOR	BACILLUS SUBTILIS	86-107								
PDADA_ECOLI	D-AMINO ACID DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PDAOA_ALTHA	NA(+)-LINKED D-ALANINE GLYCINE PERMEASE	ALTEROMONAS HALOPLANKTIS	332-373								
PDAMX_ECOLI	DAMX PROTEIN	ESCHERICHIA COLI	68-95	349-380							
PDAPA_ECOLI	DIHYDRODIPICOLINATE SYNTHASE	ESCHERICHIA COLI	27-54	157-184							
PDATI_BACSU	DNA--PROTEIN-CYSTEINE METHYLTRANSFERASE	BACILLUS SUBTILIS	113-47								
PDBHA_ECOLI	DNA-BINDING PROTEIN HU-ALPHA	ESCHERICHIA COLI	12-39								
PDBH_CLOPA	DNA-BINDING PROTEIN HU	CLOSTRIDIUM PASTEURIANUM	12-53								
PDCAM_ECOLI	DECARBOXYLASE PROENZYME	ESCHERICHIA COLI	146-173								
PDCDA_CORGL	DIAMINOPIMELATE DECARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	134-161								
PDCDA_PSEAE	DIAMINOPIMELATE DECARBOXYLASE	PSEUDOMONAS AERUGINOSA	37-84								
PDCEB_ECOLI	GLUTAMATE DECARBOXYLASE BETA	ESCHERICHIA COLI	4-31								
PDCH3_ENTAE	HISTIDINE DECARBOXYLASE	ENTEROBACTER AEROGENES	111-138								
PDCH5_KLEPL	HISTIDINE DECARBOXYLASE	KLEBSIELLA PLANTICOLA	111-138								
PDCH5_MORMO	HISTIDINE DECARBOXYLASE	MORGANELLA MORGANII	111-138								
PDCID_BACSU	DIPEPTIDE TRANSPORT PROTEIN DCIAD	BACILLUS SUBTILIS	188-222								
PDCLY_HAFAL	LYSINE DECARBOXYLASE	HAFNIA ALVEI	305-332								
PDCOA_KLEPN	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	KLEBSIELLA PNEUMONIAE	261-288	342-369							
PDCOA_SALTY	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	SALMONELLA TYPHIMURIUM	261-288	342-369							
PDCOB_SALTY	OXALOACETATE DECARBOXYLASE BETA CHAIN	SALMONELLA TYPHIMURIUM	299-326								
PDCTB_RHILE	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM LEGUMINOSARUM	377-411								
PDCTB_RHIME	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM MELILOTI	511-538								
PDEAD_ECOLI	ATP-DEPENDENT RNA HELICASE DEAD	ESCHERICHIA COLI	268-295	518-545							
PDEAD_KLEPN	ATP-DEPENDENT RNA HELICASE DEAD	KLEBSIELLA PNEUMONIAE	267-294	519-546							
PDEDA_ECOLI	DEDA PROTEIN	ESCHERICHIA COLI	106-133								
PDEGS_BACSU	SENSOR PROTEIN DEGS	BACILLUS SUBTILIS	31-70	75-159	292-327						
PDEH1_MORSP	HALOACETATE DEHALOGENASE H-2	MORAXELLA SP	114-141								
PDEOC_ECOLI	DEOXYRIBOSE-PHOSPHATE ALDOLASE	ESCHERICHIA COLI	134-161								
PDHAL_PSEOL	ALDEHYDE DEHYDROGENASE	PSEUDOMONAS OLEOVORANS	6-33								
PDHAS_BACSU	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	BACILLUS SUBTILIS	150-184								
PDHAS_CORGL	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	43-70	312-339							
PDHAS_ECOLI	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	ESCHERICHIA COLI	229-256								
PDHAS_VIBCH	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	VIBRIO CHOLERAE	309-336								
PDHA_BACSH	ALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	149-176								
PDHA_BACST	ALANINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	94-121								
PDHE3_CLODI	NAD-SPECIFIC GLUTAMATE DEHYDROGENASE	CLOSTRIDIUM DIFFICILE	116-143								
PDHE3_PEPAS	D-SPECIFIC GLUTAMATE DEHYDROGENASE	PEPTOSTREPTOCOCCUS ASACCHAROLYTICUS	247-274	345-380							
PDHE3_SULSO	GLUTAMATE DEHYDROGENASE	SULFOLOBUS SOLFATARICUS	2-36								
PDHEA_CORGL	NADP-SPECIFIC GLUTAMATE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	188-215	229-256							
PDHGA_ACICA	GLUCOSE DEHYDROGENASE-A	ACINETOBACTER CALCOACETICUS	10-39	190-217							

PCGENE	1071178.4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
ELLENAME	PROTEIN	ORGANISM								
PDHGB_BACME	GLUCOSE 1-DEHYDROGENASE B	BACILLUS MEGATERIUM	27-57							
PDHG_ECOLI	GLUCOSE DEHYDROGENASE	ESCHERICHIA COLI	438-463							
PDHG_STRVN	GLUCOSE DEHYDROGENASE	STREPTOMYCES VIOLACEORUBER	168-195							
PDHK1_STRVN	KETOACYL REDUCTASE 1	STREPTOMYCES VIOLACEORUBER	192-219							
PDHLE_BACST	LEUCINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	317-344							
PDHLO_AGRT4	D-LYSOPINE DEHYDROGENASE	AGROBACTERIUM TUMEFACIENS	153-187	190-224						
PDHM1_METEX	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM ORGANOPHILUM	153-187	190-224						
PDHM1_METOR	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	PARACOCCUS DENITRIFICANS	195-222							
PDHM1_PARDE	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	BACILLUS SP	284-314							
PDHNA_BACSP	NADH DEHYDROGENASE	ESCHERICHIA COLI	180-214							
PDHNA_ECOLI	NADH DEHYDROGENASE	BACILLUS SUBTILIS	73-107	406-433						
PDHOM_BACSU	HOMOSERINE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	105-132							
PDHOM_CORGL	HOMOSERINE DEHYDROGENASE	BACILLUS SPHAERICUS	212-239							
PDHPH_BACSH	PHENYLALANINE DEHYDROGENASE	ESCHERICHIA COLI	482-512							
PDHSA_ECOLI	SUCC DEHYDROGENASE FLAVOPROTEIN SUBUNIT	ANABAENA CYLINDRICA	86-113	130-168						
PDHSS_ANACY	SOLUBLE HYDROGENASE 42 KD SUBUNIT	SYNECHOCOCCUS SP	133-160							
PDHSS_SYNP1	SOLUBLE HYDROGENASE, SMALL SUBUNIT	METHYLOTROPHUS METHYLOPHILUS	439-466							
PDHTM_METME	TRIMETHYLAMINE DEHYDROGENASE	ESCHERICHIA COLI	384-411							
PDING_ECOLI	PROBABLE ATP-DEPENDENT HELICASE DING	BACILLUS SUBTILIS	54-82	114-141						
PDIVB_BACSU	DIVISION INITIATION PROTEIN	PSEUDOMONAS PUTIDA	93-120							
PDLDJ_PSEPU	DIHYDROLIPOAMIDE DEHYDROGENASE	AZOTOBACTER VINELANDII	18-45	224-276						
PDLDH_AZOVI	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS STEAROTHERMOPHILUS	82-124							
PDLDH_BACST	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS SUBTILIS	82-109							
PDLDH_BACSU	LIPOAMIDE DEHYDROGENASE COMP (E3)	ESCHERICHIA COLI	108-135							
PDLDH_ECOLI	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	124-151	223-275						
PDLDH_PSEFL	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS PUTIDA	63-90							
PDMOH_PSEPU	PHENOL HYDROXYLASE P3 PROTEIN	PSEUDOMONAS PUTIDA	497-524	548-581						
PDNA1_BACSU	DNAK PROTEIN	BACILLUS SUBTILIS	436-483							
PDNA3_BACSU	DNAK PROTEIN	BACILLUS SUBTILIS	316-380							
PDNAA_BACSU	DNAA PROTEIN	BACILLUS SUBTILIS	187-216	248-275	341-387	436-463				
PDNAA_BORBU	DNAA PROTEIN	BORRELIA BURGDORFERI	73-100	111-138	333-380					
PDNAA_BUCAP	DNAA PROTEIN	BUCHNERA APHIDICOLA	366-400							
PDNAA_ECOLI	DNAA PROTEIN	ESCHERICHIA COLI	385-415							
PDNAA_MICLU	DNAA PROTEIN	MICROCOCCUS LUTEUS	8-36	75-112	274-310	350-389				
PDNAA_MYCCA	DNAA PROTEIN	MYCOPLASMA CAPRICOLUM	365-399							
PDNAA_PROMI	DNAA PROTEIN	PROTEUS MIRABILIS	398-439							
PDNAA_PSEPU	DNAA PROTEIN	PSEUDOMONAS PUTIDA	45-72	76-110	145-180					
PDNAA_SPICI	DNAA PROTEIN	SPIROPLASMA CITRI	312-353							
PDNAB_CHLTR	DNAB-LIKE PROTEIN	CHLAMYDIA TRACHOMATIS	82-109							
PDNAB_ECOLI	DNAB PROTEIN	ESCHERICHIA COLI	82-109							
PDNAB_SALTY	DNAB PROTEIN	SALMONELLA TYPHIMURIUM	146-190							
PDNAC_ECOLI	DNAC PROTEIN	ESCHERICHIA COLI	497-524	548-581						
PDNAK_BACME	DNAK PROTEIN	BACILLUS MEGATERIUM	312-594							
PDNAK_BORBU	DNAK PROTEIN	BORRELIA BURGDORFERI	248-275	512-546						
PDNAK_BRUOV	DNAK PROTEIN	BRUCELLA OVIS	361-388							
PDNAK_CAUCR	DNAK PROTEIN	CAULOBACTER CRESCENTUS	499-526							
PDNAK_CLOAB	DNAK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	496-527							
PDNAK_CLOPE	DNAK PROTEIN	CLOSTRIDIUM PERFRINGENS	523-550							
PDNAK_METMA	DNAK PROTEIN	METHANOSARCINA MAZEI	502-529							
PDNAK_MYCTU	DNAK PROTEIN	MYCOBACTERIUM TUBERCULOSIS	45-72	533-572						
PDNAK_STRCO	DNAK PROTEIN	STREPTOMYCES COELICOLOR	114-141							
PDNR_ECOLI	REGULATORY PROTEIN DNR	ESCHERICHIA COLI	658-712							
PDNLI_ZYMMO	DNA LIGASE	ZYMOMONAS MOBILIS	24-51							
PDNRJ_STRPE	TRANSDUCTION PROTEIN DNRJ	STREPTOMYCES PEUCETIUS	104-172							
PDOCR_SULSO	PRORABLE SIGNAL RECOGNITION PARTICLE PROTE	SULFOLOBUS SOLFATARICUS	58-85	413-444	1382-1416					
PDP1A_BACSU	DNA POLYMERASE III, ALPHA CHAIN	BACILLUS SUBTILIS	77-104							
PDP1A_ECOLI	DNA POLYMERASE III, ALPHA CHAIN	ESCHERICHIA COLI								
PDP1A_SACER	DNA POLYMERASE III, ALPHA CHAIN	SACCHAROPOLYSPORA ERYTHRAEA	230-257							

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PDPJA_SALTY	DNA POLYMERASE III, ALPHA CHAIN	SALMONELLA TYPHIMURIUM	77-104								
PDPJB_BACSU	DNA POLYMERASE III, BETA CHAIN	BACILLUS SUBTILIS	212-239								
PDPJB_BORBU	DNA POLYMERASE III, BETA CHAIN	BORRELIA BURGDORFERI	266-313								
PDPJB_BUCAP	DNA POLYMERASE III, BETA CHAIN	BUCHNERA APHIDICOLA	31-62	308-359							
PDPJB_MICLU	DNA POLYMERASE III, BETA CHAIN	MICROCOCCUS LUTEUS	191-218								
PDPJB_MYCCA	DNA POLYMERASE III, BETA CHAIN	MYCOPLASMA CAPRICOLUM	36-70								
PDPJB_PSEPU	DNA POLYMERASE III, BETA CHAIN	PSEUDOMONAS PUTIDA	30-60								
PDPJB_SPICI	DNA POLYMERASE III, BETA CHAIN	SPIROPLASMA CITRI	78-112	129-177	273-310						
PDPJX_BACSU	DNA POLYMERASE III SUBUNITS GAMMA AND TAU	BACILLUS SUBTILIS	231-272								
PDPC2_ECOLI	DNA PRIMASE TRAC-2	ESCHERICHIA COLI	691-743								
PDPC4_ECOLI	DNA PRIMASE TRAC-4	ESCHERICHIA COLI	401-448								
PDPND_STRPN	DPND PROTEIN	STREPTOCOCCUS PNEUMONIAE	79-120								
PDPO1_BACCA	DNA POLYMERASE I	BACILLUS CALDOTENAX	208-235								
PDPO1_STRPN	DNA POLYMERASE I	STREPTOCOCCUS PNEUMONIAE	198-225	398-425	571-598	645-672					
PDPO1_THEAQ	DNA POLYMERASE	THERMUS AQUATICUS	196-223	602-629							
PDPO1_THEFL	DNA POLYMERASE	THERMUS AQUATICUS	597-628								
PDPO2_ECOLI	DNA POLYMERASE II	ESCHERICHIA COLI	569-596								
PDPOL_PYRFU	DNA POLYMERASE	PYROCOCCUS FURIOSUS	746-773								
PDPOL_SULSO	DNA POLYMERASE	SULFOLOBUS SOLFATARICUS	379-406	436-463	625-659	747-774					
PDPOL_THELI	DNA POLYMERASE	THERMOCOCCUS LITORALIS	332-370	551-589	892-926	1004-1031	1153-1194				
PDPP_LACLA	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPP_LACLC	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPS_ECOLI	DNA PROTECTION DURING STARVATION PROTEIN	ESCHERICHIA COLI	4-45								
PDRN1_STREQ	DEOXYRIBONUCLEASE PRECURSOR	STREPTOCOCCUS EQUISIMILIS	33-60	291-318							
PDRRA_STRPE	DAUNORUBICIN RESISTANCE ATP-BINDING PROTEI	STREPTOMYCES PEUCETIUS	286-313								
PDYRA_STAAU	DIHYDROFOLATE REDUCTASE TYPE I	STAPHYLOCOCCUS AUREUS	62-89								
PE13B_BACCI	GLUCAN ENDO-1,3-BETA-GLUCOSIDASE A1 PREC	BACILLUS CIRCULANS	134-161	305-339	424-451						
PEAE_ECOLI	ATTACHING AND EFFACING PROTEIN	ESCHERICHIA COLI	66-100	158-185	525-552	691-725	802-836	871-905			
PEBGR_ECOLI	EBG OPERON REPRESSOR PROTEIN	ESCHERICHIA COLI	151-178								
PEBR_STAAU	ETHIDIUM BROMIDE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	68-98								
PECHH_RHOCA	ENOYL-COA HYDRATASE HOMOLOG	RHODOBACTER CAPSULATUS	222-249								
PECPD_ECOLI	CHAPERONE PROTEIN ECPD PRECURSOR	ESCHERICHIA COLI	20-47								
PEDD_ZYMMO	PHOSPHOGLUCONATE DEHYDRATASE	ZYMOMONAS MOBILIS	12-39								
PEDN_STAAU	EPIDERMAL CELL DIF INH PRECURSOR	STAPHYLOCOCCUS AUREUS	52-79	119-146							
PEF2_DESMO	ELONGATION FACTOR 2	DESULFUROCOCCUS MOBILIS	427-461								
PEF2_HALHA	ELONGATION FACTOR 2	HALOBACTERIUM HALOBIUM	186-213								
PEF2_METVA	ELONGATION FACTOR 2	METHANOCOCCUS VANNIELII	409-436								
PEF2_SULAC	ELONGATION FACTOR 2	SULFOLOBUS ACIDOCALDARIUS	36-63	145-180							
PEF2_THEAC	ELONGATION FACTOR 2	THERMOPLASMA ACIDOPHILUM	13-40	49-76	220-247						
PEFG_ANANI	ELONGATION FACTOR G	ANACYSTIS NIDULANS	332-359								
PEFG_ECOLI	ELONGATION FACTOR G	ESCHERICHIA COLI	234-261								
PEFG_MYCLE	ELONGATION FACTOR G	MYCOBACTERIUM LEPRAE	211-259	330-357							
PEFG_SALTY	ELONGATION FACTOR G	SALMONELLA TYPHIMURIUM	234-261								
PEFG_SPIPL	ELONGATION FACTOR G	SPIRULINA PLATENSIS	334-374	481-511							
PEFG_SYNY3	ELONGATION FACTOR G	SYNECHOCYSTIS SP	14-41								
PEFT1_STRRA	ELONGATION FACTOR TU1	STREPTOMYCES RAMOCISSIMUS	221-258								
PEFT2_STRRA	ELONGATION FACTOR TU2	STREPTOMYCES RAMOCISSIMUS	221-258								
PEFT3_STRRA	ELONGATION FACTOR TU3	STREPTOMYCES RAMOCISSIMUS	228-255								
PEFTS_ECOLI	ELONGATION FACTOR EF-TS	ESCHERICHIA COLI	101-135								
PEFTS_SPICI	ELONGATION FACTOR EF-TS	SPIROPLASMA CITRI	27-54	134-161							
PEFTU_BACFR	ELONGATION FACTOR TU	BACTEROIDES FRAGILIS	18-45	229-256							
PEFTU_BACSU	ELONGATION FACTOR TU	BACILLUS SUBTILIS	11-45	230-257							
PEFTU_BURCE	ELONGATION FACTOR TU	BURKHOLDERIA CEPACIA	26-53								
PEFTU_CHLTR	ELONGATION FACTOR TU	CHLAMYDIA TRACHOMATIS	218-245								
PEFTU_DEISP	ELONGATION FACTOR TU	DEINONEMA SP	230-257								
PEFTU_FLESI	ELONGATION FACTOR TU	FLEXISTIPES SINUSARABICI	221-248								
PEFTU_HALMA	ELONGATION FACTOR TU	HALOARCULA MARISMORTUI	4-31								

PCGENE	107x17814	Prokaryotic Sequences	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PEFTU_MICLU	ELONGATION FACTOR TU	MICROCOCCUS LUTEUS	221-248								
PEFTU_MYCHO	ELONGATION FACTOR TU	MYCOPLASMA HOMINIS	222-249								
PEFTU_MYCLE	ELONGATION FACTOR TU	MYCOBACTERIUM LEPRAE	220-247								
PEFTU_MYCTU	ELONGATION FACTOR TU	MYCOBACTERIUM TUBERCULOSIS	220-247								
PEFTU_SHEPU	ELONGATION FACTOR TU	SHEWANELLA PUTREFACIENS	26-53								
PEFTU_STRSR	ELONGATION FACTOR TU	STREPTOCOCCUS ORALIS	222-249								
PELAS_PSEAE	PSEUDOLYSIN PRECURSOR	PSEUDOMONAS AERUGINOSA	141-168								
PELT1_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	78-105								
PELT1_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	78-106								
PELTB_CLOPE	T-LABILE ENTEROTOXIN B CHAIN PRECURSOR	CLOSTRIDIUM PERFRINGENS	228-269								
PENTD_ECOLI	ENTEROBACTIN SYNTHETASE COMPONENT D	ESCHERICHIA COLI	134-188								
PENYM_SALTY	ENVM PROTEIN	SALMONELLA TYPHIMURIUM	34-61								
PEP1B_STAEP	117 KD MEMBRANE ASSOCIATED PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	51-80	125-259	290-325	387-421	837-889				
PEPIC_STAEP	EPIDERMIN BIOSYNTHESIS PROTEIN EPIC	STAPHYLOCOCCUS EPIDERMIDIS	411-447								
PEPIP_STAEP	SERINE PROTEASE EPIP PRECURSOR	STAPHYLOCOCCUS EPIDERMIDIS	7-58	297-333							
PEPIY_STAEP	HYPOTHETICAL 10.7 KD PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	70-101								
PEPIZ_STAEP	HYPOTHETICAL PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	42-100								
PERA_ECOLI	GTP-BINDING ERA PROTEIN	ESCHERICHIA COLI	18-45								
PERBS_SACER	SENSORY TRANSDUCTION PROTEIN ERYC1	SACCHAROPOLYSPORA ERYTHRAEA	309-343								
PERDA_ECOLI	ERYTHROMYCIN ESTERASE TYPE I	ESCHERICHIA COLI	37-64	141-170							
PERYJ_SACER	ERYTHRONOLIDE SYNTHASE, MODULES 5 AND 6	SACCHAROPOLYSPORA ERYTHRAEA	9-36	967-994	1117-1144						
PESTA_STRSC	ESTERASE PRECURSOR	STREPTOMYCES SCABIES	138-155								
PESTE_PSEFL	ARYLESTERASE	PSEUDOMONAS FLUORESCENS	162-189								
PETC1_STAAU	ENTEROTOXIN TYPE C-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206							
PETC2_STAAU	ENTEROTOXIN TYPE C-2 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206							
PETC3_STAAU	ENTEROTOXIN TYPE C-3 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206							
PETXA_STAAU	ENTEROTOXIN TYPE A PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	165-192							
PETXB_CLOPE	EPSILON-TOXIN, TYPE B PRECURSOR	CLOSTRIDIUM PERFRINGENS	209-236								
PETXB_STAAU	ENTEROTOXIN TYPE B PRECURSOR	STAPHYLOCOCCUS AUREUS	64-101	171-207							
PETXD_STAAU	ENTEROTOXIN TYPE D PRECURSOR	STAPHYLOCOCCUS AUREUS	153-200								
PETXE_STAAU	ENTEROTOXIN TYPE E PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	88-115							
PEUTC_SALTY	ETHANOLAMINE AMMONIA-LYASE LIGHT CHAIN	SALMONELLA TYPHIMURIUM	116-150								
PEVGA_ECOLI	PUTATIVE TRANSCRIPTION REG EVGA	ESCHERICHIA COLI	62-89								
PEVGS_ECOLI	PUTATIVE SENSOR PROTEIN EVGS	ESCHERICHIA COLI	45-79	249-276	431-458	526-553	829-856				
PEXOB_ECOLI	EXODEOXYRIBONUCLEASE V	ESCHERICHIA COLI	226-253								
PEXOB_ECOLI	BIOPOLYMER TRANSPORT EXBB PROTEIN	ESCHERICHIA COLI	80-107								
PEXOA_RHIME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOA	RHIZOBIUM MELILOTI	180-207								
PEXOA_STRPN	EXODEOXYRIBONUCLEASE	STREPTOCOCCUS PNEUMONIAE	218-254								
PEXOF_RHIME	EXOF PROTEIN	RHIZOBIUM MELILOTI	236-270	327-361							
PEXOH_RHIME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOH	RHIZOBIUM MELILOTI	252-279								
PEXOP_RHIME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOP	RHIZOBIUM MELILOTI	211-242	272-299	330-391						
PFADB_ECOLI	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	ESCHERICHIA COLI	36-63	177-204							
PFADL_ECOLI	FATTY ACID TRANSPORT PROTEIN PRECURSOR	ESCHERICHIA COLI	220-247								
PFAED_ECOLI	OUTER MEMBRANE PROTEIN FAED PRECURSOR	ESCHERICHIA COLI	223-257	421-453	507-541						
PFAEF_ECOLI	K88 MINOR FIMBRIAL SUBUNIT PRECURSOR	ESCHERICHIA COLI	18-48								
PFAND_ECOLI	FAND PROTEIN PRECURSOR	ESCHERICHIA COLI	160-194	186-423	596-623	730-757					
PFANE_ECOLI	CHAPERONE PROTEIN FANE PRECURSOR	ESCHERICHIA COLI	22-58								
PFANG_ECOLI	FANG PROTEIN PRECURSOR	ESCHERICHIA COLI	104-131								
PFANH_ECOLI	FANH PROTEIN PRECURSOR	ESCHERICHIA COLI	93-141								
PFAOB_PSEFR	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	PSEUDOMONAS FRAGI	8-42	295-322							
PFDHD_WOLSU	FDHD PROTEIN	WOLINELLA SUCCINOGENES	64-98								
PFDHF_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	613-640								
PFDH_PSESA	FORMATE DEHYDROGENASE	PSEUDOMONAS SP	49-76	366-393							
PFDNO_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	288-315	323-350	696-730						
PFECA_ECOLI	TRANSPORT PROTEIN FECA PRECURSOR	ESCHERICHIA COLI	331-361								
PFECC_ECOLI	TRANSPORT PROTEIN 1, CYTOSOLIC	ESCHERICHIA COLI	210-237								
PFECI_ECOLI	FECI PROTEIN	ESCHERICHIA COLI	131-158								

PCGENE	1871171b4	Prokaryotic Sequences								
ZILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PFEMB_STAAU	POSSIBLE PROTEIN FEMB	STAPHYLOCOCCUS AUREUS	22-56							
PFENR_SYNP2	FERREDOXIN--NADP REDUCTASE	SYNECHOCOCCUS SP	4-31							
PFEPC_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPC	ESCHERICHIA COLI	176-201							
PFEPE_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPE	ESCHERICHIA COLI	182-234	281-308						
PFEPO_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPO	ESCHERICHIA COLI	128-155							
PFERH_ANASP	FERREDOXIN, HETEROCYST	ANABAENA SP	2-29							
PFERX_ANASP	FERREDOXIN-LIKE PROTEIN IN NIF REGION	ANABAENA SP	67-94							
PFHAB_BORPE	FILAMENTOUS HEMAGGLUTININ	BORDETELLA PERTUSSIS	1128-1158	1359-1386	2063-2114	2841-2868	3051-3085	3167-3194		
PFHAC_BORPE	HAEMOLYSIN-LIKE PROTEIN FHAC PRECURSOR	BORDETELLA PERTUSSIS	342-369							
PFHLA_ECOLI	FORMATE HYDROGENLYASE TRANSACTIVATOR	ESCHERICHIA COLI	36-63	350-384	401-428					
PFHUA_ECOLI	FERRICHROME-IRON RECEPTOR PRECURSOR	ESCHERICHIA COLI	458-485							
PFHUB_ECOLI	PROTEIN FHUB PRECURSOR	ESCHERICHIA COLI	227-254							
PFHUE_ECOLI	OUTER-MEMBRANE RECEPTOR	ESCHERICHIA COLI	587-614							
PFIB_SPICI	FIBRIL PROTEIN	SPIROPLASMA CITRI	161-195	326-367						
PFIC_ECOLI	CELL FILAMENTATION PROTEIN FIC	ESCHERICHIA COLI	151-178							
PFIC_SALTY	CELL FILAMENTATION PROTEIN FIC	SALMONELLA TYPHIMURIUM	151-178							
PFIMC_BORPE	OUTER MEMBRANE PROTEIN FIMC PRECURSOR	BORDETELLA PERTUSSIS	208-235	340-367	618-645					
PFIMC_ECOLI	CHAPERONE PROTEIN FIMC PRECURSOR	ESCHERICHIA COLI	31-78							
PFIMD_ECOLI	FIMD PROTEIN PRECURSOR	ESCHERICHIA COLI	222-253	458-485	534-561	563-590				
PFIME_ECOLI	TYPE 1 FIMBRIAE REGULATORY PROTEIN FIME	ESCHERICHIA COLI	165-192							
PFIMY_SALTY	FIMBRIAE Y PROTEIN	SALMONELLA TYPHIMURIUM	49-76							
PFIMZ_ECOLI	FIMBRIAE Z PROTEIN	ESCHERICHIA COLI	42-69	162-192	196-230					
PFIMZ_SALTY	FIMBRIAE Z PROTEIN	SALMONELLA TYPHIMURIUM	175-209							
PFINQ_ECOLI	FINQ PROTEIN	ESCHERICHIA COLI	145-172							
PFIRA_RICJO	FIRA PROTEIN	RICKETTSIA RICKETTSII	162-189							
PFIXC_AZOCA	FIXC PROTEIN	AZORHIZOBIUM CAULINODANS	129-156							
PFIXL_AZOCA	SENSOR PROTEIN FIXL	AZORHIZOBIUM CAULINODANS	247-274							
PFIXL_BRAJA	SENSOR PROTEIN FIXL	BRADYRHIZOBIUM JAPONICUM	27-54	253-280						
PFLA1_BORBU	FLAGELLAR FILAMENT 41 KD CORE PROTEIN	BORRELIA BURGDORFERI	8-35	271-298						
PFLA1_HALHA	FLAGELLIN A1 PRECURSOR	HALOBACTERIUM HALOBIUM	63-92	157-184						
PFLA1_METVO	FLAGELLIN B1 PRECURSOR	METHANOCOCCUS VOLTAE	28-73	133-160						
PFLA2_METVO	FLAGELLIN B2 PRECURSOR	METHANOCOCCUS VOLTAE	28-66							
PFLA3_HALHA	FLAGELLIN B1 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63							
PFLA3_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	35-76							
PFLA4_HALHA	FLAGELLIN B2 PRECURSOR	HALOBACTERIUM HALOBIUM	36-90	157-184						
PFLA5_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63	154-181						
PFLA6_BACSU	FLAA LOCUS 22.9 KD PROTEIN	BACILLUS SUBTILIS	73-149	133-186						
PFLAA_CAMJE	FLAGELLIN A	CAMPYLOBACTER COLI	15-42	144-191	487-515					
PFLAA_CAMJE	FLAGELLIN A	CAMPYLOBACTER JEJUNI	220-266	310-337	500-528					
PFLAA_METVO	FLAGELLIN A PRECURSOR	METHANOCOCCUS VOLTAE	28-63							
PFLAA_PSEAE	FLAGELLIN	PSEUDOMONAS AERUGINOSA	3-41	51-88	97-124					
PFLAA_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	181-219	228-265	360-391					
PFLAA_SPIAU	FLAGELLAR FILAMENT PROTEIN PRECURSOR	SPIROCHAETA AURANTIA	162-189							
PFLAA_TREPA	FLAGELLAR FILAMENT PROTEIN PRECURSOR	TREPONEMA HYODYSENTERIAE	53-89	219-245						
PFLAA_TREPA	FLAGELLAR FILAMENT OUTER LAYER PROTEIN	TREPONEMA PALLIDUM	243-270							
PFLAB_CAMCO	FLAGELLIN B	CAMPYLOBACTER COLI	144-191	497-525						
PFLAB_CAMJE	FLAGELLIN B	CAMPYLOBACTER JEJUNI	220-266	310-337	500-528					
PFLAB_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	86-113	177-219	228-255	360-391				
PFLAV_CLOAB	FLAVODOXIN	CLOSTRIDIUM AB	18-52							
PFLAY_CAUCR	REGULATORY PROTEIN FLAY	CAULOBACTER CRESCENTUS	291-318	551-578						
PFLA_BACSU	FLAGELLIN	BACILLUS SUBTILIS	102-129	228-255						
PFLGG_BACSU	FLAGELLAR BASAL-BODY ROD PROTEIN FLGG	BACILLUS SUBTILIS	62-89							
PFLGK_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 1	SALMONELLA TYPHIMURIUM	12-50	133-160	456-540					
PFLGL_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	ESCHERICHIA COLI	61-105	229-266						
PFLGL_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	SALMONELLA TYPHIMURIUM	61-105	229-266						
PFLHD_ECOLI	FLAGELLAR TRANSCRIPTIONAL ACTIVATOR FLHD	ESCHERICHIA COLI	6-33							
PFLIA_PSEAE	FLAGELLAR OPERON RNA POL SIGMA FACTOR	PSEUDOMONAS AERUGINOSA	198-232							

PCGENE	107:1784	Prokaryotic Sequence	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
SEQNAME	PROTEIN	ORGANISM	1-41	186-211	295-329	431-466					
PFLIC_ECOLI	FLAGELLIN	ESCHERICHIA COLI	1-41	54-125	136-198						
PFLIC_SALCH	FLAGELLIN	SALMONELLA CHOLERAE-SUIS	1-41	54-88	136-177	232-259	272-299	376-403			
PFLIC_SALMU	FLAGELLIN	SALMONELLA MUENCHEN	1-41	54-125	136-184						
PFLIC_SALPA	FLAGELLIN	SALMONELLA PARATYPHI-A	1-41	54-125	136-196						
PFLIC_SALRU	FLAGELLIN	SALMONELLA RUBISLAW	1-41	54-125	136-200						
PFLIC_SALTY	FLAGELLIN	SALMONELLA TYPHIMURIUM	1-41	15-42	55-89	103-130	137-164	275-321			
PFLIC_SERMA	FLAGELLIN	SERRATIA MARCESCENS	32-66	106-133	160-187	216-298	326-445				
PFLID_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	ESCHERICHIA COLI	32-66	106-133	255-299	407-438					
PFLID_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	SALMONELLA TYPHIMURIUM	32-66	106-133							
PFLIE_BACSU	FLAG HOOK-BASAL BODY PROTEIN FLIE	BACILLUS SUBTILIS	8-35								
PFLIF_BACSU	FLAGELLAR M-RING PROTEIN	BACILLUS SUBTILIS	327-361	391-418							
PFLIF_CAUCR	FLAGELLAR M-RING PROTEIN	CAULOBACTER CRESCENTUS	24-51	297-324	361-388						
PFLIF_SALTY	FLAGELLAR M-RING PROTEIN	SALMONELLA TYPHIMURIUM	484-529								
PFLIG_BACSU	FLAGELLAR SWITCH PROTEIN FLIG	BACILLUS SUBTILIS	35-62								
PFLIG_ECOLI	FLAGELLAR SWITCH PROTEIN FLIG	ESCHERICHIA COLI	44-71								
PFLII_BACSU	PROBABLE FLIII PROTEIN	BACILLUS SUBTILIS	19-46	105-132							
PFLIJ_BACSU	FLAGELLAR FLIJ PROTEIN	BACILLUS SUBTILIS	7-37								
PFLIJ_SALTY	FLAGELLAR FLIJ PROTEIN	SALMONELLA TYPHIMURIUM	75-118	117-144							
PFLIK_BACSU	PROBABLE FLIK PROTEIN	BACILLUS SUBTILIS	77-104	78-105	109-136						
PFLIL_BACSU	FLIL PROTEIN	BACILLUS SUBTILIS	10-71	105-132							
PFLIL_ECOLI	FLIL PROTEIN	ESCHERICHIA COLI	105-132	101-133							
PFLIL_SALTY	FLIL PROTEIN	SALMONELLA TYPHIMURIUM	101-133	148-175							
PFLIM_BACSU	FLIM PROTEIN	BACILLUS SUBTILIS	148-175	231-278							
PFLIM_ECOLI	FLIM PROTEIN	ESCHERICHIA COLI	231-278	56-83							
PFLIN_CAUCR	FLAGELLAR MOTOR SWITCH PROTEIN	CAULOBACTER CRESCENTUS	56-83	59-86							
PFLIS_ECOLI	FLAGELLAR PROTEIN FLIS	ESCHERICHIA COLI	59-86	9-46	67-106						
PFLIT_SALTY	FLAGELLAR PROTEIN FLIT	SALMONELLA TYPHIMURIUM	9-46	30-67	80-114						
PFM12_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFM1A_ECOLI	TYPE-1 FIMBRIAL PROTEIN, A CHAIN PRECURSOR	ESCHERICHIA COLI	5-32								
PFM1C_ECOLI	TYPE-1 FIMBRIAL PROTEIN, C CHAIN PRECURSOR	ESCHERICHIA COLI	11-38								
PFM1_ACTVI	FIMBRIAL SUBUNIT TYPE 1 PRECURSOR	ACTINOMYCES VISCOSUS	248-282	352-379	417-444						
PFM1_ECOLI	FIMBRIAL PROTEIN 97P PRECURSOR	ESCHERICHIA COLI	114-141								
PFM90_ECOLI	FIMBRIAL PROTEIN 90P PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMA0_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA1_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA2_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMA7_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	123-150								
PFMAA_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-141								
PFMAF_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	93-123								
PFMAH_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	111-145								
PFMAJ_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	96-123								
PFMAJ_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PFMCD_PSEAE	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	106-144	335-382							
PFMDD_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMDH_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	97-124								
PFMF3_ECOLI	F17 FIMBRIAL PROTEIN PRECURSOR	ESCHERICHIA COLI	70-97								
PFMM1_NEIME	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA MENINGITIDIS	66-97								
PFMM2_NEIGO	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA GONORRHOEAE	108-146								
PFMM4_MORNO	FIMBRIAL PROTEIN PRECURSOR	MORAXELLA NONLIQUEFACIENS	30-67	80-114							
PFMM8_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PFMP1_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	60-87	112-139							
PFMS1_ECOLI	CS1 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	49-98								
PFMS3_ECOLI	CS3 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	102-129								
PFM_HAEIN	MAJOR FIMBRIAL SUBUNIT PRECURSOR	HAEMOPHILUS INFLUENZAE	41-83	188-215	311-365	431-458	517-555	632-686	722-756		
PFNBA_STAAU	FIBRONECTIN-BINDING PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	123-159								
PFOLC_ECOLI	FOLYLPOLYGLUTAMATE SYNTHASE	ESCHERICHIA COLI	129-156								
PFOLC_LACCA	FOLYLPOLYGLUTAMATE SYNTHASE	LACTOBACILLUS CASEI	133-180								
PFPO_BACFI	FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE	BACILLUS FIRMUS									

PCGENE	107a17844	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PFRDA_ECOLI	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	395-422								
PFRDA_WOLSU	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	WOLINELLA SUCCINOGENES	8-35	487-514							
PFRZE_MYXXA	GLIDING MOTILITY REGULATORY PROTEIN	MYXOCOCCUS XANTHUS	15-42	478-505							
PFTHS_CLOTH	FORMATE--TETRAHYDROFOLATE LIGASE	CLOSTRIDIUM THERMOACETUN	163-190								
PFTR_METTH	FORMYLTRANSFERASE	METHANOBACTERIUM THERMOAUTOTROPHICU	9-43								
PFTSA_BACSU	CELL DIVISION PROTEIN FTSA	BACILLUS SUBTILIS	76-110								
PFTSA_ECOLI	CELL DIVISION PROTEIN FTSA	ESCHERICHIA COLI	301-338	375-418							
PFTSJ_ECOLI	CELL DIVISION PROTEIN FTSJ	ESCHERICHIA COLI	4-31								
PFTSL_ECOLI	CELL DIVISION PROTEIN FTSL	ESCHERICHIA COLI	61-90								
PFTSN_ECOLI	CELL DIVISION PROTEIN FTSN	ESCHERICHIA COLI	131-188								
PFTSX_ECOLI	CELL DIVISION PROTEIN FTSX	ESCHERICHIA COLI	278-305								
PFTSY_ECOLI	CELL DIVISION PROTEIN FTSY	ESCHERICHIA COLI	230-260								
PFUCR_ECOLI	L-FUCOSE OPERON ACTIVATOR	ESCHERICHIA COLI	7-45								
PFUMA_BACST	FUMARATE HYDRATASE CLASS I, AEROBIC	BACILLUS STEAROTHERMOPHILUS	290-317								
PFUMI_BACSU	FUMARATE HYDRATASE	BACILLUS SUBTILIS	414-445								
PFUR_YERPE	FERRIC UPTAKE REGULATION PROTEIN	YERSINIA PESTIS	99-130								
PGIP1_ECOLI	GLYC3-PHOS DEHYDROGENASE A	ESCHERICHIA COLI	302-329								
PGIP2_ANAVA	GLYC3-PHOS DEHYDROGENASE 2	ANABAENA VARIABILIS	87-114								
PGIP3_ANAVA	GLYC3-PHOS DEHYDROGENASE 3	ANABAENA VARIABILIS	162-189								
PGIP3_ECOLI	GLYC3-PHOS DEHYDROGENASE C	ESCHERICHIA COLI	236-324								
PGIP_BACME	GLYC3-PHOS DEHYDROGENASE	BACILLUS MEGATERIUM	49-76	237-271							
PGIP_BACSU	GLYC3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	49-76								
PGIP_PYRWO	GLYC3-PHOS DEHYDROGENASE	PYROCOCCUS WOESEI	259-286								
PGIP_THEMA	GLYC3-PHOS DEHYDROGENASE	THERMOTOGA MARITIMA	290-318								
PGMPB_BACST	GLUCOSE-6-PHOSPHATE ISOMERASE B	BACILLUS STEAROTHERMOPHILUS	103-143	241-268							
PGMPD_ECOLI	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ESCHERICHIA COLI	301-328								
PGMPD_ZYMMO	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ZYMOMONAS MOBILIS	165-192								
PGACA_PSEFL	CYANIDE CONTROL PROTEIN	PSEUDOMONAS FLUORESCENS	178-205								
PGALI_SALTY	GALACTOKINASE	SALMONELLA TYPHIMURIUM	86-113								
PGALT_HAEIN	GAL-1-PHOS URIDYLYLTRANSFERASE	HAEMOPHILUS INFLUENZAE	124-158	219-269							
PGALT_LACHE	GAL-1-PHOS URIDYLYLTRANSFERASE	LACTOBACILLUS HELVETICUS	304-338								
PGALF_SALTY	GALACTOSE OPERON REPRESSOR	SALMONELLA TYPHIMURIUM	53-91								
PGALR_HAEIN	GALACTOSE OPERON REPRESSOR	HAEMOPHILUS INFLUENZAE	182-209								
PGAL_PSEFL	DE D-GALACTOSE 1-DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	251-278								
PGCH2_ECOLI	GTP CYCLOHYDROLASE II	ESCHERICHIA COLI	78-105								
PGCH2_PHOLE	GTP CYCLOHYDROLASE II	PHOTOBACTERIUM LEIOGNATHI	197-227	246-273							
PGCSH_ECOLI	GLYCINE CLEAVAGE SYSTEM H PROTEIN	ESCHERICHIA COLI	10-37								
PGCSP_ECOLI	GLYCINE DEHYDROGENASE	ESCHERICHIA COLI	216-246								
PGCVA_ECOLI	GLYCINE CLEAVAGE SYSTEM TRANSACTIVATOR	ESCHERICHIA COLI	60-94								
PGENK_ECOLI	PROTEIN K	ESCHERICHIA COLI	24-51								
PGERI_BACSU	SPORE GERMINATION PROTEIN I	BACILLUS SUBTILIS	49-83	182-216	350-384						
PGERJ_BACSU	SPORE GERMINATION PROTEIN III PRECURSOR	BACILLUS SUBTILIS	293-323								
PGERE_BACSU	GERMINATION PROTEIN GERE	BACILLUS SUBTILIS	13-40								
PGGI2_STAHA	ANTIBACTERIAL PROTEIN 2	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGGI3_STAHA	ANTIBACTERIAL PROTEIN 3	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGIDA_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN A	BACILLUS SUBTILIS	396-423								
PGIDA_ECOLI	GLUCOSE INHIBITED DIVISION PROTEIN A	ESCHERICHIA COLI	533-568								
PGIDA_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN A	PSEUDOMONAS PUTIDA	539-566								
PGIDB_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN B	BACILLUS SUBTILIS	34-61								
PGIDB_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN B	PSEUDOMONAS PUTIDA	25-52								
PGLCP_SYNY3	GLUCOSE TRANSPORT PROTEIN	SYNECHOCYSTIS SP	288-322								
PGLDA_BACST	GLYCEROL DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	20-79								
PGLGA_ECOLI	GLYCOGEN SYNTHASE	ESCHERICHIA COLI	236-263								
PGLGC_ECOLI	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	ESCHERICHIA COLI	114-141								
PGLGC_SALTY	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	114-141								
PGLMS_ECOLI	GLUC-FRUC-6-PHOSAMINOTRANSFERASE	ESCHERICHIA COLI	209-243								
PGLN1_METTL	GLNB-LIKE PROTEIN 1	METHANOCOCCUS THERMOLITHOTROPHICUS	38-85								

PCGENE	Prokaryotic Sequences									
FILENAME	ORGANISM	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PGLNA_ANASP	ANABAENA SP	8-42								
PGLNA_BACSU	BACILLUS SUBTILIS	4-31								
PGLNA_CLOAB	CLOSTRIDIUM ACETOBUTYLICUM	413-440								
PGLNA_ECOLI	ESCHERICHIA COLI	144-171								
PGLNA_METVO	METHANOCOCCUS VOLTAE	201-230								
PGLNA_PROVU	PROTEUS VULGARIS	142-169								
PGLNA_PYRFU	PYROCOCCUS FURIOSUS	391-421								
PGLNA_SALTY	SALMONELLA TYPHIMURIUM	144-171								
PGLNA_STRCO	STREPTOMYCES COELICOLOR	186-211								
PGLNB_AZOBR	AZOSPIRILLUM BRASILENSE	15-49								
PGLNB_RHOCA	RHODOBACTER CAPSULATUS	15-49								
PGLNB_SYNP6	SYNECHOCOCCUS SP	52-79								
PGLND_ECOLI	ESCHERICHIA COLI	120-147	151-178							
PGLND_SALTY	SALMONELLA TYPHIMURIUM	151-178								
PGLNE_ECOLI	ESCHERICHIA COLI	103-130	413-440	761-790						
PGLNH_ECOLI	ESCHERICHIA COLI	126-153								
PGLNQ_BACST	BACILLUS STEAROTHERMOPHILUS	7-34								
PGLPD_BACSU	BACILLUS SUBTILIS	194-230								
PGLPD_ECOLI	ESCHERICHIA COLI	410-437								
PGLPF_BACSU	BACILLUS SUBTILIS	235-274								
PGLPK_BACSU	BACILLUS SUBTILIS	44-93								
PGLPK_ECOLI	ESCHERICHIA COLI	56-90								
PGLPR_ECOLI	ESCHERICHIA COLI	5-32								
PGLPX_ECOLI	ESCHERICHIA COLI	297-324								
PGLPX_SHIFL	SHIGELLA FLEXNERI	297-324								
PGLRX_ECOLI	ESCHERICHIA COLI	24-51								
PGLTB_ECOLI	ESCHERICHIA COLI	482-509								
PGLTP_ECOLI	ESCHERICHIA COLI	119-146								
PGLVB_ECOLI	ESCHERICHIA COLI	130-157								
PGLYA_BRAJA	BRADYRHIZOBIUM JAPONICUM	29-60								
PGLYA_CAMJE	CAMPYLOBACTER JEJUNI	376-403								
PGLYA_HYPME	HYPHOMICROBIUM METHYLOVORUM	28-55								
PGMG7_BACSU	COMG OPERON PROTEIN 7	111-67	88-112							
PGNTK_BACSU	BACILLUS SUBTILIS	218-271								
PGP1D_CHLTR	CHLAMYDIA TRACHOMATIS	315-333								
PGP2D_CHLTR	CHLAMYDIA TRACHOMATIS	97-131								
PGP3D_CHLTR	CHLAMYDIA TRACHOMATIS	24-52								
PGP4D_CHLTR	CHLAMYDIA TRACHOMATIS	61-106	191-220							
PGP7D_CHLTR	CHLAMYDIA TRACHOMATIS	12-60								
PGP8D_CHLTR	CHLAMYDIA TRACHOMATIS	94-121								
PGREA_MORA	RICKETTSIA PROWAZEKII	15-49								
PGRFE_BORBU	BACILLUS SUBTILIS	27-53								
PGRFE_BORBU	BORRELIA BURGDORFERI	2-79								
PGRFE_CLOAB	CLOSTRIDIUM ACETOBUTYLICUM	12-83								
PGRSA_BACBR	BACILLUS BREVIS	545-572	799-826	840-882	1015-1062					
PGRSB_BACBR	BACILLUS BREVIS	48-75	94-121	241-282	1126-1153	1211-1240	2162-2189	2359-2386	2819-2846	3606-3633
PGSHI_ECOLI	ESCHERICHIA COLI	239-266	274-301							
PGSHR_ECOLI	ESCHERICHIA COLI	100-134	270-311							
PGSHR_PSEAE	PSEUDOMONAS AERUGINOSA	80-114								
PGSIA_BACSU	BACILLUS SUBTILIS	74-101	265-296							
PGSPD_ERWCA	ERWINIA CAROTOVORA	258-285	316-343	389-419						
PGSPD_ERWCH	ERWINIA CHRYSANTHEMI	259-302	307-338	351-378	659-686					
PGSPD_KLEPN	KLEBSIELLA PNEUMONIAE	259-286								
PGSPE_ERWCA	ERWINIA CAROTOVORA	329-367								
PGSPE_ERWCH	ERWINIA CHRYSANTHEMI	329-367								
PGSPE_KLEPN	KLEBSIELLA PNEUMONIAE	323-361								
PGSPE_PSEAE	PSEUDOMONAS AERUGINOSA	122-149	331-369							

PCGENE	1087:1784	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 7	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PGSPF_XANCP	PROTEIN F	XANTHOMONAS CAMPESTRIS	230-257								
PGSPH_PSEAE	PROTEIN H PRECURSOR	PSEUDOMONAS AERUGINOSA	18-59								
PGSPI_AERHY	PROTEIN I PRECURSOR	AEROMONAS HYDROPHILA	27-61								
PGSPI_ERWCA	PROTEIN I PRECURSOR	ERWINIA CAROTOVORA	15-62								
PGSPJ_KLEPN	PROTEIN J PRECURSOR	KLEBSIELLA PNEUMONIAE	140-167								
PGSPK_ERWCA	PROTEIN K	ERWINIA CAROTOVORA	28-55								
PGSPK_ERWCH	PROTEIN K	ERWINIA CHRYSANTHEMI	28-55								
PGSPK_KLEPN	PROTEIN K	KLEBSIELLA PNEUMONIAE	72-99								
PGSPK_PSEAE	PROTEIN K	PSEUDOMONAS AERUGINOSA	262-289								
PGSPL_ERWCH	PROTEIN L	ERWINIA CHRYSANTHEMI	7-42	248-286	331-358						
PGSPL_XANCP	PROTEIN L	XANTHOMONAS CAMPESTRIS	39-73	297-324							
PGSPM_ERWCA	PROTEIN M	ERWINIA CAROTOVORA	108-145								
PGSQD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	259-302	448-475	546-573	657-684					
PGTF1_STRDO	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS DOWNEI	42-69	177-204	212-239	464-491	1382-1416	1495-1529			
PGTF1_STRDO	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS DOWNEI	171-198	206-233	458-485	1382-1412	1497-1524				
PGTFA_STRMU	GLUCOSYLTRANSFERASE-S	STREPTOCOCCUS MUTANS	297-350								
PGTFB_STRMU	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS MUTANS	42-93	110-137	161-188	199-246	313-347	592-627			
PGTFC_STRMU	GLUCOSYLTRANSFERASE-SI PRECURSOR	STREPTOCOCCUS MUTANS	4-40	110-138	235-262	330-361	614-653				
PGTFS_STRDO	GLUCOSYLTRANSFERASE-S PRECURSOR	STREPTOCOCCUS DOWNEI	275-316	436-463	1281-1315						
PGTMR_METTF	POSSIBLE G-T MISMATCHES REPAIR ENZYME	METHANOBACTERIUM THERMOFORMICICUM	80-107	148-175							
PGUAA_BACSU	GMP SYNTHASE	BACILLUS SUBTILIS	314-348	399-436	478-505						
PGUAA_ECOLI	GMP SYNTHASE	ESCHERICHIA COLI	105-132								
PGUB_BACCI	BETA-GLUCANASE PRECURSOR	BACILLUS CIRCULANS	164-191								
PGUB_BACLI	BETA-GLUCANASE PRECURSOR	BACILLUS LICHENIFORMIS	132-166								
PGUB_BACMA	BETA-GLUCANASE PRECURSOR	BACILLUS MACERANS	126-160								
PGUN1_BACS4	ENDOGLUCANASE A	BACILLUS SP	18-49								
PGUN1_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304	376-403							
PGUN1_BUTFI	ENDOGLUCANASE 1	BUTYRIVIBRIO FIBRISOLVENS	154-181	452-495							
PGUN2_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUN2_THEFU	ENDOGLUCANASE E-2 PRECURSOR	THERMOMONOSPORA FUSCA	201-228								
PGUN3_BACS4	ENDOGLUCANASE C PRECURSOR	BACILLUS SP	110-137	348-378	538-565						
PGUN3_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUN3_FIBSU	ENDOGLUCANASE 3 PRECURSOR	FIBROBACTER SUCCINOGENES	542-586								
PGUN4_THEFU	ENDOGLUCANASE E-4 PRECURSOR	THERMOMONOSPORA FUSCA	308-342								
PGUN5_THEFU	ENDOGLUCANASE E-5 PRECURSOR	THERMOMONOSPORA FUSCA	44-71								
PGUNA_BACLA	ENDOGLUCANASE A PRECURSOR	BACILLUS LAUTUS	410-437	454-481							
PGUNA_CLOTM	ENDOGLUCANASE A PRECURSOR	CLOSTRIDIUM THERMOCELLUM	354-384								
PGUNA_PSEFL	ENDOGLUCANASE A PRECURSOR	PSEUDOMONAS FLUORESCENS	762-789								
PGUNA_RUMAL	ENDOGLUCANASE A	RUMINOCOCCUS ALBUS	294-321								
PGUNA_RUMFL	CELLODEXTRINASE A	RUMINOCOCCUS FLAVEFACIENS	276-303								
PGUNB_BACLA	ENDOGLUCANASE B PRECURSOR	BACILLUS LAUTUS	375-450								
PGUNB_CALSA	ENDOGLUCANASE B	CALDOCELLUM SACCHAROLYTICUM	151-182	444-478							
PGUNB_CELFI	ENDOGLUCANASE B PRECURSOR	CELLULOMONAS FIMI	266-293								
PGUNB_CLOCL	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM CELLULOVORANS	144-171	266-300							
PGUNB_CLOTM	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM THERMOCELLUM	514-541								
PGUNC_CELFI	ENDOGLUCANASE C PRECURSOR	CELLULOMONAS FIMI	881-908								
PGUNC_PSEFL	ENDOGLUCANASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	52-82								
PGUND_CLOCE	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	382-453								
PGUND_CLOCL	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	145-172	271-298							
PGUNE_CLOTM	ENDOGLUCANASE E PRECURSOR	CLOSTRIDIUM THERMOCELLUM	158-185	207-234	284-311						
PGUNH_CLOTM	ENDOGLUCANASE H PRECURSOR	CLOSTRIDIUM THERMOCELLUM	46-73	425-452							
PGUNS_ERWCA	ENDOGLUCANASE PRECURSOR	ERWINIA CAROTOVORA	20-47	115-149							
PGUNX_CLOTM	PUTATIVE ENDOGLUCANASE X	CLOSTRIDIUM THERMOCELLUM	105-139								
PGUNZ_CLOSR	ENDOGLUCANASE Z PRECURSOR	CLOSTRIDIUM STERCORARIUM	296-326	522-549							
PGUN_BACPO	ENDOGLUCANASE	BACILLUS POLYMYXA	198-225								
PGUN_BACS1	ENDOGLUCANASE PRECURSOR	BACILLUS SP	321-348								
PGUN_BACS6	ENDOGLUCANASE PRECURSOR	BACILLUS SP	198-229	501-528	623-664						

PCGENE	10Jul96s4	Prokaryotic Sequences								
CLE_NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PGUTD_ECOLI	SORBITOL-6-PHOSPHATE 2-DEHYDROGENASE	ESCHERICHIA COLI	138-165								
PGVP1_HALJA	GAS VESICLE PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	36-63								
PGVP2_HALHA	GAS VESICLE PROTEIN, CHROMOSOMAL	HALOBACTERIUM HALOBIUM	36-63								
PGVPA_APHFL	GAS VESICLE PROTEIN	APHANIZOMENON FLOS-AQUAE	4-31	39-66							
PGVPA_FREDI	GAS VESICLE PROTEIN	FREMYELLA DIPLOSIPHON	4-31	39-66							
PGVPA_HALME	GAS VESICLE PROTEIN	HALOBACTERIUM MEDITERRANEI	37-64								
PGVPA_MICBC	GAS VESICLE PROTEIN	MICROCYSTIS SP	39-66								
PGVPA_PSEAN	GAS VESICLE PROTEIN	PSEUDOANABAENA SP	4-31	39-66							
PGVPC_APHFL	GAS VESICLE PROTEIN C	APHANIZOMENON FLOS-AQUAE	8-49								
PGVPC_HALHA	GAS VESICLE PROTEIN C	HALOBACTERIUM HALOBIUM	150-249								
PGVPC_HALME	GAS VESICLE PROTEIN C	HALOBACTERIUM MEDITERRANEI	139-169								
PGVPD_HALHA	GVPD PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	110-147								
PGVPD_HALME	GVPD PROTEIN	HALOBACTERIUM MEDITERRANEI	110-147								
PGVPF_HALHA	GVPF PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	11-47	135-169							
PGVPF_HALME	GVPF PROTEIN	HALOBACTERIUM MEDITERRANEI	11-47								
PGVPF_HALSA	GVPF PROTEIN	HALOBACTERIUM SALINARIUM	8-49								
PGVPG_HALHA	GVPG PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	38-65								
PGVPG_HALME	GVPG PROTEIN	HALOBACTERIUM MEDITERRANEI	38-72								
PGVPH_HALHA	GVPH PROTEIN	HALOBACTERIUM HALOBIUM	10-40								
PGVPI_HALME	GVPI PROTEIN	HALOBACTERIUM MEDITERRANEI	5-32								
PGVPK_HALHA	GVPK PROTEIN	HALOBACTERIUM HALOBIUM	45-76								
PGVPK_HALME	GVPK PROTEIN	HALOBACTERIUM MEDITERRANEI	12-39	47-74							
PGVPK_HALSA	GVPK PROTEIN	HALOBACTERIUM SALINARIUM	11-38	50-77							
PGVPL_HALME	GVPL PROTEIN	HALOBACTERIUM MEDITERRANEI	44-78								
PGVPN_HALHA	GVPN PROTEIN	HALOBACTERIUM HALOBIUM	113-140								
PGVPN_HALME	GVPN PROTEIN	HALOBACTERIUM MEDITERRANEI	15-56								
PGVPO_HALME	GVPO PROTEIN	HALOBACTERIUM MEDITERRANEI	69-96	103-132							
PGYRA_BACSU	DNA GYRASE SUBUNIT A	BACILLUS SUBTILIS	380-407	429-499							
PGYRA_CAMJE	DNA GYRASE SUBUNIT A	CAMPYLOBACTER JEJUNI	267-310	381-408	452-479	665-695					
PGYRA_ECOLI	DNA GYRASE SUBUNIT A	ESCHERICHIA COLI	266-293	449-497							
PGYRA_KLEPN	DNA GYRASE SUBUNIT A	KLEBSIELLA PNEUMONIAE	266-293	448-496	518-545						
PGYRA_MYCPN	DNA GYRASE SUBUNIT A	MYCOPLASMA PNEUMONIAE	4-31								
PGYRA_STAAU	DNA GYRASE SUBUNIT A	STAPHYLOCOCCUS AUREUS	129-156	346-373	430-479	647-674	812-839				
PGYRB_BACSU	DNA GYRASE SUBUNIT B	BACILLUS SUBTILIS	198-239								
PGYRB_BORBU	DNA GYRASE SUBUNIT B	BORRELIA BURGDORFERI	134-181								
PGYRB_ECOLI	DNA GYRASE SUBUNIT B	ESCHERICHIA COLI	616-643								
PGYRB_HALSQ	DNA GYRASE SUBUNIT B	HALOFERAX SP	230-257								
PGYRB_MYCPN	DNA GYRASE SUBUNIT B	MYCOPLASMA PNEUMONIAE	249-283								
PGYRB_NEIGO	DNA GYRASE SUBUNIT B	NEISSERIA GONORRHOEAE	524-558	618-645							
PGYRB_PSEPU	DNA GYRASE SUBUNIT B	PSEUDOMONAS PUTIDA	122-149	684-711							
PGYRB_SPICI	DNA GYRASE SUBUNIT B	SPIROPLASMA CITRI	40-74	189-238	283-310	341-368	540-579				
PGYRB_STAAU	DNA GYRASE SUBUNIT B	STAPHYLOCOCCUS AUREUS	232-279	291-318							
PHDHA_ECOLI	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	ESCHERICHIA COLI	71-98								
PHELD_ECOLI	HELICASE IV	ESCHERICHIA COLI	100-114	529-536							
PHEL_HAEIN	LIPOPROTEIN E PRECURSOR	HAEMOPHILUS INFLUENZAE	58-85								
PIEMI_CHLVI	GLUTAMYL-TRNA REDUCTASE	CHLOROBIUM VIBRIOFORMES	232-259								
PIEMI_ECOLI	GLUTAMYL-TRNA REDUCTASE	ESCHERICHIA COLI	289-316								
PIEMI_RHOSH	5-AMINOLEVULINIC ACID SYNTHASE	RHODOBACTER SPHAEROIDES	73-100								
PIEMI_SALTY	GLUTAMYL-TRNA REDUCTASE (	SALMONELLA TYPHIMURIUM	289-316	344-371							
PIEMI_SYNY3	GLUTAMYL-TRNA REDUCTASE	SYNECHOCYSTIS SP	163-190	350-377							
PIEMJ_METSC	DELTA-AMINOLEVULINIC ACID DEHYDRATASE	METHANOTHERMUS SOCIABILIS	131-158								
PHEM4_BACSU	PUTATIVE UROPORPHYRINOGEN-III SYNTHASE	BACILLUS SUBTILIS	10-37								
PHEM4_ECOLI	UROPORPHYRINOGEN-III SYNTHASE	ESCHERICHIA COLI	211-238								
PIEM4_ECOLI	HEMD PROTEIN	ESCHERICHIA COLI	147-174								
PHEMR_YEAEN	HEMIN RECEPTOR PRECURSOR	YERSINIA ENTEROCOLITICA	234-261								
PHEMX_ECOLI	PUTATIVE METHYLTRANSFERASE	ESCHERICHIA COLI	69-138	185-219							
PIEMY_BACSU	HEMY PROTEIN	BACILLUS SUBTILIS	217-262								

PCGENE	1073x1784	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMZ_BACSU	FERROCHELATASE	BACILLUS SUBTILIS	199-226								
PHETA_ANASP	HETEROCYST DIFFERENTIATION PROTEIN	ANABAENA SP	184-211	357-398	521-565						
PHEXA_STRPN	DNA MISMATCH REPAIR PROTEIN HEXA	STREPTOCOCCUS PNEUMONIAE	426-460								
PHEXB_STRPN	DNA MISMATCH REPAIR PROTEIN HEXB	STREPTOCOCCUS PNEUMONIAE	470-497								
PHFAB_CAUCR	POS TRANSACTIVATOR PROTEIN HFAB	CAULOBACTER CRESCENTUS	98-125								
PHFLC_ECOLI	HFLC PROTEIN	ESCHERICHIA COLI	113-140								
PHFLX_ECOLI	GTP-BINDING PROTEIN HFLX	ESCHERICHIA COLI	169-196								
PHFQ_ECOLI	HOST FACTOR-I PROTEIN	ESCHERICHIA COLI	24-51								
PHIFC_HAEIN	PILIATION PROTEIN HIFC PRECURSOR	HAEMOPHILUS INFLUENZAE	356-383	404-431	447-474						
PHIS2_LACLA	PHOSPHORIBOSYL-AMP CYCLOHYDROLASE	LACTOCOCCUS LACTIS	126-174								
PHIS4_ECOLI	P-S-A CARBOXAMIDE RIBOTIDE	ESCHERICHIA COLI	125-159								
PHIS4_LACLA	P-S-A CARBOXAMIDE RIBOTIDE	LACTOCOCCUS LACTIS	49-89	181-228							
PHIS4_METVA	P-S-A CARBOXAMIDE RIBOTIDE	METHANOCOCCUS VANNIELII	115-142								
PHIS4_SALTY	P-S-A CARBOXAMIDE RIBOTIDE	SALMONELLA TYPHIMURIUM	125-159								
PHIS5_LACLA	AMIDOTRANSFERASE HISH	LACTOCOCCUS LACTIS	7-34								
PHIS6_ECOLI	HISF PROTEIN	ESCHERICHIA COLI	39-66	142-169							
PHIS6_SALTY	HISF PROTEIN	SALMONELLA TYPHIMURIUM	39-66	142-169							
PHIS7_ECOLI	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	ESCHERICHIA COLI	168-199								
PHIS7_SALTY	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	SALMONELLA TYPHIMURIUM	161-199								
PHIS8_ECOLI	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	ESCHERICHIA COLI	290-317								
PHIS8_HALVO	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	HALOBACTERIUM VOLCANII	174-201								
PHIS8_LACLA	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	LACTOCOCCUS LACTIS	161-188								
PHIS8_SALTY	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	SALMONELLA TYPHIMURIUM	293-320								
PHISQ_SALTY	HISTIDINE PERMEASE MEMBRANE Q PROTEIN	SALMONELLA TYPHIMURIUM	8-35								
PHISX_ECOLI	HISTIDINOL DEHYDROGENASE	ESCHERICHIA COLI	393-434								
PHISX_LACLA	HISTIDINOL DEHYDROGENASE	LACTOCOCCUS LACTIS	19-46	264-303							
PHISX_MYCSM	HISTIDINOL DEHYDROGENASE	MYCOBACTERIUM SMEGMATIS	288-329	399-430							
PHISX_SALTY	HISTIDINOL DEHYDROGENASE	SALMONELLA TYPHIMURIUM	393-434								
PHLA_STAAU	ALPHA-HEMOLYSIN PRECURSOR	STAPHYLOCOCCUS AUREUS	69-103								
PHLY1_ECOLI	HEMOLYSIN A, CHROMOSOMAL	ESCHERICHIA COLI	5-32	76-103	161-224	234-261	353-380	458-492	554-581	642-728	
PHLY2_ECOLI	HAEMOLYSIN SECRETION PROTEIN, CHROMOSOMA	ESCHERICHIA COLI	487-514								
PHLY4_ECOLI	HEMOLYSIN D, CHROMOSOMAL	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLYA_ACTPL	HEMOLYSIN	ACTINOBACILLUS PLEUROPNEUMONIAE	5-39	136-170	184-218	273-300	350-377	459-527	846-924		
PHLYA_ACTSU	HEMOLYSIN	ACTINOBACILLUS SUIS	5-39	136-170	184-218	273-300	350-377	459-500	846-924		
PHLYA_ECOLI	HEMOLYSIN A, PLASMID	ESCHERICHIA COLI	5-32	76-103	161-262	354-381	452-493	555-582	643-729		
PHLYA_PROMI	HEMOLYSIN PRECURSOR	PROTEUS MIRABILIS	165-196	299-338	356-400	425-471	498-525	528-576	610-695	705-742	747-774
			789-823	841-868	968-993	1113-1140	1166-1193	1225-1273	1301-1342	1391-1461	1483-1527
PHLYA_SERMA	HEMOLYSIN PRECURSOR	SERRATIA MARCESCENS	311-345	477-504	558-585	625-703	718-745	830-864	1081-1108	1155-1202	1249-1286
			1516-1553								
PHLYA_VIBCH	HEMOLYSIN PRECURSOR	VIBRIO CHOLERAE	335-369	638-665							
PHLYB_ACTPL	HAEMOLYSIN SECRETION PROTEIN	ACTINOBACILLUS PLEUROPNEUMONIAE	34-61								
PHLYB_ECOLI	HAEMOLYSIN SECRETION PROTEIN, PLASMID	ESCHERICHIA COLI	487-514								
PHLYB_PROMI	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	PROTEUS MIRABILIS	16-64	499-547							
PHLYB_PROVU	HAEMOLYSIN SECRETION PROTEIN	PROTEUS VULGARIS	34-68	487-514							
PHLYB_SERMA	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	SERRATIA MARCESCENS	110-137								
PHLYB_VIBCH	HEMOLYSIN SECRETION PROTEIN PRECURSOR	VIBRIO CHOLERAE	335-398	413-447	458-524						
PHLYC_ACTPL	HEMOLYSIN C	ACTINOBACILLUS PLEUROPNEUMONIAE	130-157								
PHLYD_ACTPL	HEMOLYSIN SECRETION PROTEIN APPD	ACTINOBACILLUS PLEUROPNEUMONIAE	191-331								
PHLYD_ECOLI	HEMOLYSIN D, PLASMID	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLY_HALI7	HALOLYSIN PRECURSOR	HALOPHILIC BACTERIA STRAIN 172P1	484-516								
PHMCJ_DESVH	43.2 KD PROTEIN IN HMC OPERON	DESULFOVIBRIO VULGARIS	156-186								
PHMD_METKA	H(2)-FORMING DEHYDROGENASE	METHANOPYRUS KANDLERI	36-63								
PHNS_SERMA	DNA-BINDING PROTEIN H-NS	SERRATIA MARCESCENS	35-62								
PHOLA_ECOLI	DNA POLYMERASE III, DELTA SUBUNIT	ESCHERICHIA COLI	94-121	288-322							
PHOXA_BRAJA	REG PROTEIN HOXA	BRADYRHIZOBIUM JAPONICUM	113-163	444-471							
PHOXF_NOCOP	HOXS ALPHA SUBUNIT	NOCARDIA OPACA	4-31								
PHOXQ_ALCEU	HOXQ PROTEIN	ALCALIGENES EUTROPHUS	76-110								

PCGENE	107a17bt4	Prokaryotic Sequence									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PHOXX_BRAJA	HOXX PROTEIN	BRADYRHIZOBIUM JAPONICUM	356-383									
PHPI_DEIRA	HEXAGONALLY SURFACE PROTEIN PRECURSOR	DEINOCOCCUS RADIODURANS	383-612									
PHPRT_LACLA	PHOSPHORIBOSYLTRANSFERASE	LACTOCOCCUS LACTIS	1-39	71-105								
PHRDD_STRCO	SIGMA FACTOR HRDD	STREPTOMYCES COELICOLOR	396-423									
PHRPB_BURSO	REGULATORY PROTEIN HRPB	BURKHOLDERIA SOLANACEARUM	371-405									
PHRPH_PSESY	OUTER MEMBRANE PROTEIN HRPH PRECURSOR	PSEUDOMONAS SYRINGAE	102-129	310-344								
PHRPS_PSESH	PROBABLE REGULATORY PROTEIN HRPS	PSEUDOMONAS SYRINGAE	24-51									
PHS18_CLOAB	18 KD HEAT SHOCK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	67-108									
PHS70_HALMA	HEAT SHOCK 70 KD PROTEIN	HALOARCULA MARISMORTUI	[illegible]	[illegible]								
PHS70_MYCLE	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM LEPRAE	461-488	[illegible]								
PHS70_MYCPA	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM PARATUBERCULOSIS	460-487	[illegible]								
PHTPG_ECOLI	HEAT SHOCK PROTEIN C62.5	ESCHERICHIA COLI	231-258	482-509								
PHTRA_ECOLI	PROTEASE DO PRECURSOR	ESCHERICHIA COLI	231-490									
PHTRE_ECOLI	HTRE PROTEIN PRECURSOR	ESCHERICHIA COLI	454-484	524-576								
PHTRJ_HALHA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM HALOBIUM	411-431	478-506								
PHTRJ_HALSA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM SALINARIUM	414-434	413-431	479-506							
PHUTP_BACSU	HUT OPERON POSITIVE REGULATORY PROTEIN	BACILLUS SUBTILIS	4-36									
PHYTI_LACHE	HELVETICIN J	LACTOBACILLUS HELVETICUS	174-212	306-333								
PHYCA_ECOLI	FORMATE HYDROGENLYASE SUBUNIT 1	ESCHERICHIA COLI	73-100	106-133								
PHYDG_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	ESCHERICHIA COLI	231-258									
PHYDG_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	SALMONELLA TYPHIMURIUM	231-258									
PHYDH_ECOLI	SENSOR PROTEIN HYDH	ESCHERICHIA COLI	312-339	360-387								
PHYUB_PSESN	HYDANTOIN UTILIZATION PROTEIN B	PSEUDOMONAS SP	534-581									
PHYUC_PSESN	HYDANTOIN UTILIZATION PROTEIN	PSEUDOMONAS SP	6-40	96-123								
PIAAL_PSESS	INDOLEACETATE--LYSINE LIGASE	PSEUDOMONAS SYRINGAE	133-160	297-331								
PIAP_ECOLI	ALK PHOS ISOZYME CONVERSION PROTEIN	ESCHERICHIA COLI	74-101									
PICEN_ERWAN	ICE NUCLEATION PROTEIN	ERWINIA ANANAS	326-353	422-449	534-561	614-641	662-689	721-748	758-785	854-881	930-977	
			1046-1073									
PICEN_ERWHE	ICE NUCLEATION PROTEIN	ERWINIA HERBICOLA	310-337	406-433	534-561	646-673	694-721	838-865	888-913	982-1009		
PICEN_PSEFL	ICE NUCLEATION PROTEIN	PSEUDOMONAS FLUORESCENS	281-308	377-404	425-452	681-708	729-781	795-852				
PICEN_PSESY	ICE NUCLEATION PROTEIN	PSEUDOMONAS SYRINGAE	564-602	772-847	868-895	909-943						
PICEN_XANCT	ICE NUCLEATION PROTEIN	XANTHOMONAS CAMPESTRIS	496-534	535-582	1168-1204	1248-1275						
PICSB_SHIDL	INTERCELLULAR SPREAD PROTEIN	SHIGELLA FLEXNERI	41-105	438-467								
PIF2_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	540-567	681-708								
PIF2_BACSU	INITIATION FACTOR IF-2	BACILLUS SUBTILIS	173-208	394-421								
PIF2_ECOLI	INITIATION FACTOR IF-2	ESCHERICHIA COLI	686-724	835-862								
PIF2_ENTFC	INITIATION FACTOR IF-2	ENTEROCOCCUS FAECIUM	579-627									
PIF3_BACST	INITIATION FACTOR IF-3	BACILLUS STEAROTHERMOPHILUS	7-34									
PIF3_ECOLI	INITIATION FACTOR IF-3	ESCHERICHIA COLI	27-54	70-97								
PIF3_KLEPN	INITIATION FACTOR IF-3	KLEBSIELLA PNEUMONIAE	27-54	70-97								
PIF3_MYCFE	INITIATION FACTOR IF-3	MYCOPLASMA FERMENTANS	177-211									
PIF3_PROVU	INITIATION FACTOR IF-3	PROTEUS VULGARIS	2-29	70-97								
PIF3_SALTY	INITIATION FACTOR IF-3	SALMONELLA TYPHIMURIUM	27-54	70-97								
PIF3_SERMA	INITIATION FACTOR IF-3	SERRATIA MARCESCENS	19-46	70-97								
PIGA_NEIGO	IGA-SPECIFIC SERINE ENDOPEPTIDASE	NEISSERIA GONORRHOEAE	245-272	287-314	833-860	1024-1058	1377-1404	1483-1531				
PIGGB_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	193-222							
PIGGG_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	193-223	270-297						
PILVH_ECOLI	ACETOLACTATE SYNTHASE	ESCHERICHIA COLI	47-81	120-147								
PILVH_SALTY	ACETOLACTATE SYNTHASE	SALMONELLA TYPHIMURIUM	47-81	120-147								
PILVN_LACLA	ACETOLACTATE SYNTHASE	LACTOCOCCUS LACTIS	20-73									
PIMPB_SALTY	IMPB PROTEIN	SALMONELLA TYPHIMURIUM	185-212									
PINP_ACICA	INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE	ACINETOBACTER CALCOACETICUS	166-193									
PINP_BACSU	E.5'-MONOPHOSPHATE DEHYDROGENASE	BACILLUS SUBTILIS	159-186									
PINA_BACTL	INAUNE INHIBITOR A PRECURSOR	BACILLUS THURINGIENSIS	103-130	324-358								
PINLA_LISMO	INTERNALIN A	LISTERIA MONOCYTOGENES	106-143	161-188	196-232							
PINLB_LISMO	INTERNALIN B PRECURSOR	LISTERIA MONOCYTOGENES	53-94	166-200	385-415							
PINVA_YEREN	INVASIN	YERSINIA ENTEROCOLITICA	501-535									

PCGENE	107x178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIPA7_SHIFL	60 KD ANTIGEN	SHIGELLA FLEXNERI	285-312								
PIPAA_SHIFL	70 KD ANTIGEN	SHIGELLA FLEXNERI	95-136	437-475	493-537	596-630					
PIPAB_SHIDY	62 KD MEMBRANE ANTIGEN	SHIGELLA DYSENTERIAE	28-55	71-169	480-507	522-556					
PIPAB_SHIFL	62 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	28-55	71-169	480-507	522-556					
PIPAC_SHIDY	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA DYSENTERIAE	21-57	113-161	273-300	324-378					
PIPAC_SHIFL	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA FLEXNERI	28-57	113-161	273-300	324-372					
PIPAD_SHIDY	37 KD MEMBRANE ANTIGEN IPAD	SHIGELLA DYSENTERIAE	47-86	291-318							
PIPAD_SHIFL	36 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	47-86	259-286	291-318						
PIPGB_SHIDY	IPGB PROTEIN	SHIGELLA DYSENTERIAE	175-202								
PIPGB_SHIFL	IPGB PROTEIN	SHIGELLA FLEXNERI	175-202								
PIPT_PSESS	ISOPENTENYL TRANSFERASE	PSEUDOMONAS SYRINGAE	53-87	143-173							
PIPYR_ECOLI	INORGANIC PYROPHOSPHATASE	ESCHERICHIA COLI	138-172								
PIRGA_VIBCH	VIRULENCE PROTEIN PRECURSOR	VIBRIO CHOLERAE	212-239	336-377							
PIRGB_VIBCH	VIRULENCE REGULATORY PROTEIN IRGB	VIBRIO CHOLERAE		67-97							
PIRPA_SYNP7	IRON-REGULATED PROTEIN A	SYNECHOCOCCUS SP	167-194								
PISBD_SHIDY	INSERTION ELEMENT ISO-ISID PROTEIN INSB	SHIGELLA DYSENTERIAE	86-113								
PISBN_SHIDY	INSERTION ELEMENT ISO-ISIN PROTEIN INSB	SHIGELLA DYSENTERIAE	6-37								
PISB_ECOLI	INSERTION ELEMENT ISI PROTEIN INSB	ESCHERICHIA COLI	122-149								
PISB_SHIFL	INSERTION ELEMENT ISI PROTEIN INSB	SHIGELLA FLEXNERI	86-113								
PISB_SHISO	INSERTION ELEMENT ISI PROTEIN INSB	SHIGELLA SONNEI	86-113								
PISP1_BACSU	MAJOR INTRACELLULAR SERINE PROTEASE	BACILLUS SUBTILIS	115-142	197-224	253-280						
PISP_BACPO	INTRACELLULAR SERINE PROTEASE	BACILLUS POLYMYXA	109-143								
PISTA_ECOLI	ISTA PROTEIN	ESCHERICHIA COLI	183-210								
PISTA_SHISO	ISTA PROTEIN	SHIGELLA SONNEI	183-210								
PIUTA_ECOLI	FERRIC AEROBACTIN RECEPTOR PRECURSOR	ESCHERICHIA COLI	186-213	525-552	559-593						
PJAG_BACSU	JAG PROTEIN	BACILLUS SUBTILIS	68-95								
PK6P2_ECOLI	6-PHOSPHOFRUCTOKINASE ISOZYME 2	ESCHERICHIA COLI	143-170								
PKAD_BACSU	ADENYLATE KINASE	BACILLUS SUBTILIS	188-215								
PKAD_LACLA	ADENYLATE KINASE	LACTOCOCCUS LACTIS	186-213								
PKANU_BACSP	KANAMYCIN NUCLEOTIDYLTRANSFERASE	BACILLUS SP	69-96								
PKANU_STAAU	KANAMYCIN NUCLEOTIDYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	69-96								
PKDGT_ECOLI	2-KETO-3-DEOXYGLUCONATE PERMEASE	ESCHERICHIA COLI	70-97								
PKDGT_ERWCH	2-KETO-3-DEOXYGLUCONATE PERMEASE	ERWINIA CHRYSANTHEMI	126-153								
PKDTA_ECOLI	3-DEOXY-D-MANNO-OCTULOSONIC-ACID TRANS	ESCHERICHIA COLI	369-396								
PKGTP_ECOLI	ALPHA-KETOGLUTARATE PERMEASE	ESCHERICHIA COLI	7-34								
PKGUA_ECOLI	GUANYLATE KINASE	ESCHERICHIA COLI	162-189								
PKHSE_BACSU	HOMOSERINE KINASE	BACILLUS SUBTILIS	49-76								
PKHSE_FREDI	HOMOSERINE KINASE	FREMYELLA DIPLOSIPHON	52-79								
PKKA4_BACCI	AMINOGLYCOSIDE 3'-PHOSPHOTRANSFERASE	BACILLUS CIRCULANS	12-39								
PKORB_ECOLI	KORB TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	228-255								
PKPY1_SPICI	PYRUVATE KINASE	SPIROPLASMA CITRI	112-148								
PKPYK_BACST	PYRUVATE KINASE	BACILLUS STEAROTHERMOPHILUS	331-374								
PLACA_STAAU	ISOMERASE LACA SUBUNIT	STAPHYLOCOCCUS AUREUS	9-64								
PLACA_STRMU	ISOMERASE LACA SUBUNIT	STREPTOCOCCUS MUTANS	26-60								
PLACC_STRMU	TAGATOSE-6-PHOSPHATE KINASE	STREPTOCOCCUS MUTANS	56-83	283-310							
PLACG_LACCA	6-PHOSPHO-BETA-GALACTOSIDASE	LACTOBACILLUS CASEI	290-317								
PLACI_ECOLI	LACTOSE OPERON REPRESSOR	ESCHERICHIA COLI	9-36								
PLACI_KLEPN	LACTOSE OPERON REPRESSOR	KLEBSIELLA PNEUMONIAE	195-229								
PLACR_STAAU	PHOSPHOTRANSFERASE REPRESSOR	STAPHYLOCOCCUS AUREUS	2-29								
PLACR_STRMU	PHOSPHOTRANSFERASE REPRESSOR	STREPTOCOCCUS MUTANS	2-32								
PLACY_LACDE	LACTOSE PERMEASE	LACTOBACILLUS DELBRUECKII	196-230								
PLAFB_VIBPA	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	VIBRIO PARAHAEMOLYTICUS	62-89	388-415							
PLAMB_KLEPN	MALTOPORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	337-364								
PLAN1_CLOTM	ENDO-1,3(4)-BETA-GLUCANASE PRECURSOR	CLOSTRIDIUM THERMOCELLUM	132-159								
PLASI_PSEAE	OHHL SYNTHESIS PROTEIN LASI	PSEUDOMONAS AERUGINOSA	171-198								
PLCC1_LEUGE	PROBABLE LEUCOCIN A IMMUNITY PROTEIN	LEUCONOSTOC GELIDUM	41-71								
PLCNC_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCNC	LACTOCOCCUS LACTIS	162-189	207-234	388-433						

PCGENE	10Jul94	Prokaryotic Sequences										
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PLCND_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCND	LACTOCOCCUS LACTIS	99-116	140-202	237-307							
PLCRD_YEREN	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA ENTEROCOLITICA	122-149	491-518								
PLCRD_YERPE	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA PESTIS	122-149	491-518								
PLCRV_YERPE	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PESTIS	22-49	137-184	240-267							
PLCRV_YERPS	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PSEUDOTUBERCULOSIS	22-49	240-267								
PLCTB_BACCA	LCTB PROTEIN	BACILLUS CALDOTENAX	18-45									
PLCTB_BACST	LCTB PROTEIN	BACILLUS STEAROTHERMOPHILUS	14-45									
PLDHD_LACPL	D-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	31-81									
PLDHP_BACPS	L-LACTATE DEHYDROGENASE P	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-272	279-306							
PLDHX_BACPS	L-LACTATE DEHYDROGENASE X	BACILLUS PSYCIROSACCHAROLYTICUS	2-43	241-273	279-306							
PLDH_BACNE	L-LACTATE DEHYDROGENASE	BACILLUS NEGATERIUM	244-274									
PLDH_BACST	L-LACTATE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	241-268	279-313								
PLDH_BACSU	L-LACTATE DEHYDROGENASE	BACILLUS SUBTILIS	8-42	240-267								
PLDH_BIFLO	L-LACTATE DEHYDROGENASE	BIFIDOBACTERIUM LONGUM	22-49									
PLDH_LACPL	L-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	197-231									
PLDH_LISMO	L-LACTATE DEHYDROGENASE	LISTERIA MONOCYTOGENES	42-69									
PLDH_MYCHY	L-LACTATE DEHYDROGENASE	MYCOPLASMA HYOPNEUMONTAE	276-310									
PLDH_THEAQ	L-LACTATE DEHYDROGENASE	THERMUS AQUATICUS	3-30									
PLEF_BACAN	LETHAL FACTOR PRECURSOR	BACILLUS ANTHRACIS	165-192	304-331	480-514	548-578	619-658	737-764				
PLEPA_PSEFL	LEPA PROTEIN	PSEUDOMONAS FLUORESCENS	21-50									
PLEP_BACSU	SIGNAL PEPTIDASE I	BACILLUS SUBTILIS	3-30									
PLEU1_ECOLI	2-ISOPROPYLMALATE SYNTHASE	ESCHERICHIA COLI	437-464									
PLEU1_LACLA	2-ISOPROPYLMALATE SYNTHASE	LACTOCOCCUS LACTIS	22-49	179-484								
PLEU1_BACCO	3-ISOPROPYLMALATE DEHYDROGENASE	BACILLUS COAGULANS	331-358									
PLEU1_CLOPA	3-ISOPROPYLMALATE DEHYDROGENASE	CLOSTRIDIUM PASTEURIANUM	185-212									
PLEU2_LACLA	3-ISOPROPYLMALATE DEHYDRATASE	LACTOCOCCUS LACTIS	163-190									
PLEVR_BACSU	TRANSCRIPTIONAL REGULATORY PROTEIN LEVR	BACILLUS SUBTILIS	297-324	676-703	744-774	785-822						
PLEXA_ERWCA	LEXA REPRESSOR	ERWINIA CAROTOVORA	146-173									
PLIP1_MORSP	LIPASE 1	MORAXELLA SP	26-53									
PLIP2_MORSP	LIPASE 2	MORAXELLA SP	336-383									
PLIPB_ECOLI	LIPB PROTEIN	ESCHERICHIA COLI	66-93									
PLIP_BURCE	LIPASE PRECURSOR	BURKHOLDERIA CEPACIA	176-203									
PLIP_PSEFL	LIPASE PRECURSOR	PSEUDOMONAS FLUORESCENS	8-35									
PLIP_PSES1	LIPASE PRECURSOR	PSEUDOMONAS SP	176-203									
PLIP_STAAU	LIPASE PRECURSOR	STAPHYLOCOCCUS AUREUS	80-146	512-546								
PLIVB_SALTY	LEUCINE/VALINE-BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	193-220									
PLIVC_SALTY	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	195-222									
PLIVE_SALTY	AMINO ACID TRANSPORT PROTEIN LIVE	SALMONELLA TYPHIMURIUM	121-148									
PLIVE_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVE	ESCHERICHIA COLI	23-50									
PLIVI_CITFR	LEUVILEVAL-BINDING PROTEIN PRECURSOR	CITROBACTER FREUNDII	195-222									
PLIVI_ECOLI	LEUVILEVAL-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222									
PLIVK_ECOLI	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222									
PLIVM_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVM	ESCHERICHIA COLI	121-148									
PLKTA_ACTAC	LEUKOTOXIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	113-147	173-213	398-443	431-488	593-620	635-711				
PLKTA_PASHA	LEUKOTOXIN	PASTEURELLA HAEMOLYTICA	53-99	179-216	345-372	433-482	409-436	496-530	545-572	811-838	853-926	
PLKTB_ACTAC	LEUKOTOXIN SECRETION PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	487-514									
PLKTB_PASHA	LEUKOTOXIN SECRETION PROTEIN	PASTEURELLA HAEMOLYTICA	42-69	78-105	488-515							
PLKTC_ACTAC	LKTC PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	58-85	116-130								
PLKTC_PASHA	LKTC PROTEIN	PASTEURELLA HAEMOLYTICA	123-157									
PLKTD_ACTAC	LKTD PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	116-164	205-242	278-305	364-391						
PLKTD_PASHA	LKTD PROTEIN	PASTEURELLA HAEMOLYTICA	184-289									
PLON_ECOLI	ATP-DEPENDENT PROTEASE LA	ESCHERICHIA COLI	121-148									
PLPXA_RICTU	UDP-N-ACETYLGLUCOSAMINE ACYLTRANSFERASE	RICKETTSIA RICKETTSII	229-256									
PLSPA_ECOLI	LIPOPROTEIN SIGNAL PEPTIDASE	ESCHERICHIA COLI	10-37									
PLSPA_STAAU	LIPOPROTEIN SIGNAL PEPTIDASE	STAPHYLOCOCCUS AUREUS	134-161									
PLUKF_STAAU	LEUKOCIDIN F SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	161-195									
PLUKS_STAAU	LEUKOCIDIN S SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	137-207									

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PLUXA_KRYAL	ALKANAL MONOOXYGENASE ALPHA CHAIN	KRYPTOPHANARON ALFREDI	190-217								
PLUXB_PHOPO	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM PHOSPHOREUM	188-217	257-291							
PLUXB_VIBHA	ALKANAL MONOOXYGENASE BETA CHAIN	VIBRIO HARVEYI	373-400								
PLUXC_PHOLE	ACYL-COA REDUCTASE	PHOTOBACTERIUM LEIOGNATHI	44-81								
PLUXC_PHOPO	ACYL-COA REDUCTASE	PHOTOBACTERIUM PHOSPHOREUM	54-91								
PLUXC_VIBFI	ACYL-COA REDUCTASE	VIBRIO FISCHERI	16-65								
PLUXC_XENLU	ACYL-COA REDUCTASE	XENORHABDUS LUMINESCENS	39-69								
PLUXD_PHOLE	ACYL TRANSFERASE	PHOTOBACTERIUM LEIOGNATHI	89-119	218-245							
PLUXE_VIBHA	LUCIFERIN-COMPONENT LIGASE	VIBRIO HARVEYI	30-57								
PLUXF_PHOLE	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM LEIOGNATHI	145-172								
PLUXF_PHOPO	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM PHOSPHOREUM	37-85	99-126							
PLUXG_VIBFI	PROBABLE FLAVIN REDUCTASE	VIBRIO FISCHERI	137-168								
PLUXH_VIBHA	LUXH PROTEIN	VIBRIO HARVEYI	96-123								
PLUXI_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-58								
PLUXJ_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-57								
PLUXP_PHOPO	LUMAZINE PROTEIN	PHOTOBACTERIUM PHOSPHORIUM	51-85	162-189							
PLUXR_VIBHA	LUXR REGULATORY PROTEIN	VIBRIO HARVEYI	61-88								
PLXB1_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	268-295								
PLXB2_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	228-255								
PLYB_BACSU	B-ENZYME	BACILLUS SUBTILIS	87-114								
PLYC_CLOAB	AUTOLYTIC LYSOZYME	CLOSTRIDIUM ACETOBUTYLICUM	91-118								
PLYSP_ECOLI	LYSINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	142-176								
PLYTB_BACSU	AMIDASE ENHANCER PRECURSOR	BACILLUS SUBTILIS	55-82	150-177	467-513	555-585					
PLYTB_ECOLI	LYTB PROTEIN	ESCHERICHIA COLI	210-237								
PLYTC_BACSU	AMIDASE PRECURSOR	BACILLUS SUBTILIS	179-213	225-252							
PLYTR_BACSU	MEMBRANE-BOUND PROTEIN LYTR	BACILLUS SUBTILIS	13-64	259-303							
PM12_STRPY	M PROTEIN, SEROTYPE 12 PRECURSOR	STREPTOCOCCUS PYOGENES	46-92	114-156	191-300	305-342	383-417	436-494			
PM24_STRPY	M PROTEIN, SEROTYPE 24 PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	89-128	175-202	245-272	280-313	399-457			
PM49_STRPY	M PROTEIN, SEROTYPE 49 PRECURSOR	STREPTOCOCCUS PYOGENES	12-174	269-327							
PM5_STRPY	M PROTEIN, SEROTYPE 5 PRECURSOR	STREPTOCOCCUS PYOGENES	5-39	56-263	306-333	352-410					
PM6_STRPY	M PROTEIN, SEROTYPE 6 PRECURSOR	STREPTOCOCCUS PYOGENES	12-39	70-282	290-324	343-401					
PMALE_ECOLI	MALTOSE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	20-47								
PMALE_ENTAE	MALTOSE-BINDING PROTEIN PRECURSOR	ENTEROBACTER AEROGENES	20-47								
PMALK_ENTAE	INNER MEMBRANE PROTEIN MALK	ENTEROBACTER AEROGENES	3-30								
PMALT_ECOLI	MALT REGULATORY PROTEIN	ESCHERICHIA COLI	852-879								
PMALX_STRPN	MALX PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	40-67	180-207							
PMANB_BACSM	1,4-BETA-MANNOSIDASE A AND B PREC	BACILLUS SP	410-441								
PMANB_CALSA	B-MANNANASE/ENDOGLUCANASE A PREC	CALDOCELLUM SACCHAROLYTICUM	389-423	592-626	1222-1255	1296-1323					
PMAOX_BACST	MALATE OXIDOREDUCTASE	BACILLUS STEAROTHERMOPHILUS	246-273								
PMARR_ECOLI	ANTIBIOTIC RESISTANCE PROTEIN MARR	ESCHERICHIA COLI	95-122								
PMBEB_ECOLI	MOBILIZATION PROTEIN MBEB	ESCHERICHIA COLI	38-65	100-134							
PMHHL_WOLSU	QUINONE-REAC NIFE-HYDROGENASE	WOLINELLA SUCCINOGENES	440-471								
PMCBB_ECOLI	MCBB PROTEIN	ESCHERICHIA COLI	47-74	122-163							
PMCBD_ECOLI	MCBD PROTEIN	ESCHERICHIA COLI	172-206	226-253	306-345						
PMCP1_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN I	ESCHERICHIA COLI	272-299								
PMCP2_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	ESCHERICHIA COLI	258-306								
PMCP2_SALTY	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	SALMONELLA TYPHIMURIUM	258-306								
PMCP3_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN III	ESCHERICHIA COLI	288-315								
PMCP4_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN IV	ESCHERICHIA COLI	111-145	164-191	277-304						
PMCPA_CAUCR	CHEMORECEPTOR MCPA	CAULOBACTER CRESCENTUS	260-287	369-403	516-543						
PMCPC_SALTY	CHEMOTAXIS CITRATE TRANSDUCER	SALMONELLA TYPHIMURIUM	314-348								
PMCPD_ENTAE	CHEMOTAXIS ASPARTATE TRANSDUCER	ENTEROBACTER AEROGENES	275-302								
PMCPS_ENTAE	CHEMOTAXIS SERINE TRANSDUCER	ENTEROBACTER AEROGENES	41-68	158-208	317-351	488-522					
PMCRA_ECOLI	SPECIFIC RESTRICTION ENZYME A	ESCHERICHIA COLI	37-71								
PMCRA_METBA	METHYL-COENZYME M REDUCTASE	METHANOSARCINA BARKERI	375-405								
PMCRA_METVA	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VANNIELII	335-362								
PMCRA_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	336-363								

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMCRB_METFE	METHYL-COENZYME M REDUCTASE	METHANOTHERMUS FERVIDUS	267-294								
PMCRB_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	247-274								
PMCRC_ECOLI	MCRC PROTEIN	ESCHERICHIA COLI	111-145								
PMCRD_METVO	REDUCTASE OPERON PROTEIN D	METHANOCOCCUS VOLTAE	54-91								
PMDH_ECOLI	MALATE DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PMDH_METFE	MALATE DEHYDROGENASE	METHANOTHERMUS FERVIDUS	54-88								
PMDH_SALTY	MALATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	127-154								
PMDL_ECOLI	MDL PROTEIN	ESCHERICHIA COLI	464-491	684-711	992-1019						
PMDOH_ECOLI	BIOSYNTHESIS PROTEIN MDOH	ESCHERICHIA COLI	119-152								
PMECI_STAEP	METHICILLIN RESIS REG PROTEIN MECI	STAPHYLOCOCCUS	88-122								
		EPIDERMIDIS & AUREUS									
PMECR_STAEP	METHICILLIN RESISTANCE MECRI PROTEIN	STAPHYLOCOCCUS	439-495	546-573							
		EPIDERMIDIS & AUREUS									
PMEMB_METCA	METHANE MONOOXYGENASE COMPONENT A	METHYLOCOCCUS CAPSULATUS	214-248								
PMEMB_METTR	METHANE MONOOXYGENASE COMPONENT A	METHYLOSINUS TRICHOSPORIUM	321-348								
PMEND_ECOLI	SHCHC SYNTHASE	ESCHERICHIA COLI	333-367								
PMER4_STRLI	PROBABLE HG TRANSPORT PROTEIN	STREPTOMYCES LIVIDANS	159-186								
PMERA_BACSR	MERCURIC REDUCTASE	BACILLUS SP	146-180								
PMERA_STAAU	MERCURIC REDUCTASE	STAPHYLOCOCCUS AUREUS	292-347	352-386							
PMERR_STAAU	MERCURIC RESISTANCE OPERON REG PROTEIN	STAPHYLOCOCCUS AUREUS	86-113								
PMETB_ECOLI	CYSTATHIONINE GAMMA-SYNTHASE	ESCHERICHIA COLI	356-383								
PMETC_ECOLI	CYSTATHIONINE BETA-LYASE	ESCHERICHIA COLI	363-390								
PMETC_SALTY	CYSTATHIONINE BETA-LYASE	SALMONELLA TYPHIMURIUM	2-29								
PMETE_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	448-482								
PMETH_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	371-398	642-676							
PMFD_ECOLI	TRANSCRIPTION-REPAIR COUPLING FACTOR	ESCHERICHIA COLI	185-212								
PMGLA_ECOLI	GALACTOSIDE-BINDING PROTEIN	ESCHERICHIA COLI	62-89	312-380							
PMINC_BACSU	SEPTUM SITE-DETERMINING PROTEIN MINC	BACILLUS SUBTILIS	65-122								
PMIOC_ECOLI	MIOC PROTEIN	ESCHERICHIA COLI	102-129								
PMIP_CHLTR	27 KD MEMBRANE PROTEIN PRECURSOR	CHLAMYDIA TRACHOMATIS	41-75								
PMIP_LEGMI	OUTER MEMBRANE PROTEIN MIP PRECURSOR	LEGIONELLA MICDADEI	106-133								
PMLS1_ENTFA	RRNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLS1_STAAU	RRNA ADENINE N-6-METHYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	9-47								
PMLS2_ENTFA	RRNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLSB_BACFR	RRNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMLSB_ECOLI	RRNA ADENINE N-6-METHYLTRANSFERASE	ESCHERICHIA COLI	4-81	120-154							
PMLSB_STRPN	RRNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS PNEUMONIAE	4-81	120-154							
PMLSB_STRSA	RRNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS SANGUIS	4-81	120-154							
PMLSC_BACFR	RRNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMMOH_METC	METHANE MONOOXYGENASE REG PROTEIN H	METHYLOCOCCUS CAPSULATUS	34-64								
PMOAB_ECOLI	MOLYBD COFAC BIOSYN PROTEIN B	ESCHERICHIA COLI	49-76								
PMOBA_THIFE	MOBA PROTEIN	THIOBACILLUS FERROOXIDANS	94-121	251-278							
PMOBC_THIFE	MOBC PROTEIN	THIOBACILLUS FERROOXIDANS	20-47								
PMOBD_THIFE	MOBD PROTEIN	THIOBACILLUS FERROOXIDANS	95-132								
PMOB_ECOLI	MOB PROTEIN	ESCHERICHIA COLI	45-72								
PMOEA_ECOLI	MOLYBDOPTERIN BIOSYNTHESIS MOEA PROTEIN	ESCHERICHIA COLI	243-270								
PMOP1_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN I	CLOSTRIDIUM PASTEURIANUM	26-53								
PMOP2_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN II	CLOSTRIDIUM PASTEURIANUM	26-64								
PMOXY_PARDE	METHANOL UTIL CONT PROTEIN MOXY	PARACOCCUS DENITRIFICANS	200-234	307-334							
PMPEU_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEU	SYNECHOCOCCUS SP	2-36	80-107	198-225						
PMPEV_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEV	SYNECHOCOCCUS SP	2-31	175-216							
PMPRA_ECOLI	MPRA PROTEIN	ESCHERICHIA COLI	136-163								
PMRAY_BACSU	PENTAPEPTIDE-TRANSFERASE	BACILLUS SUBTILIS	106-133	247-281							
PMREB_BACCE	ROD SHAPE-DETERMINING PROTEIN MREB	BACILLUS CEREUS	186-213								
PMREC_BACSU	ROD SHAPE-DETERMINING PROTEIN MREC	BACILLUS SUBTILIS	65-112								
PMRKB_KLEPN	CHAPERONE PROTEIN MRKB PRECURSOR	KLEBSIELLA PNEUMONIAE	198-232								
PMRKC_KLEPN	MRKC PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	55-82	452-489	592-622						

PCGENE	107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMRKD_KLEPN	FIMBRIA ADHESIN PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	222-268								
PMRKE_KLEPN	MRKE PROTEIN	KLEBSIELLA PNEUMONIAE	193-220								
PMRP4_STRPY	FIBRINOGEN- / IG-BINDING PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	7-46	99-310							
PMRP_STRSU	MURAMIDASE-RELEASED PROTEIN PRECURSOR	STREPTOCOCCUS SUIS	75-102	130-177	261-291	421-448	507-534	588-622	773-800	1058-1085	
PMSBA_ECOLI	PROB ATP-BINDING TRANSPORT PROTEIN MSBA	ESCHERICHIA COLI	116-150	412-449							
PMSRA_STAEP	ERYTHROMYCIN RESISTANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	174-223	323-350							
PMSYB_ECOLI	ACIDIC PROTEIN MSYB	ESCHERICHIA COLI	73-100								
PMT57_ECOLI	MODIFICATION METHYLASE ECO57I	ESCHERICHIA COLI	250-284	474-544							
PMTA1_ACICA	MODIFICATION METHYLASE ACCI	ACINETOBACTER CALCOACETICUS	503-540								
PMTAB_SYNP2	MODIFICATION METHYLASE AQUI BETA SUBUNIT	SYNECHOCOCCUS SP	19-46								
PMTBI_BREEP	MODIFICATION METHYLASE BEPI	BREVIBACTERIUM EPIDERMIDIS	166-200	309-336							
PMTBI_HERAU	MODIFICATION METHYLASE HGIBI	HERPETOSIPHON AURANTIACUS	281-308								
PMTB2_BACAM	MODIFICATION METHYLASE BAMHII	BACILLUS AMYLOLIQUEFACIENS	35-62								
PMTBJ_BACAR	MODIFICATION METHYLASE BANIII	BACILLUS ANEURINOLYTICUS	184-211								
PMTBA_BACAR	MODIFICATION METHYLASE BANI	BACILLUS ANEURINOLYTICUS	121-148	382-409							
PMTBB_BACSU	MODIFICATION METHYLASE BSUBI	BACILLUS SUBTILIS	231-258	467-496							
PMTBF_BACSU	MODIFICATION METHYLASE BSUFI	BACILLUS SUBTILIS	208-235								
PMTCI_CITFR	MODIFICATION METHYLASE CFRBI	CITROBACTER FREUNDII	2-36	55-82	252-279						
PMTCI_HERAU	MODIFICATION METHYLASE HGICI	HERPETOSIPHON AURANTIACUS	120-147								
PMTC2_HERAU	MODIFICATION METHYLASE HGICII	HERPETOSIPHON AURANTIACUS	281-311								
PMTEI_ECOLI	MODIFICATION METHYLASE ECORI	ESCHERICHIA COLI	76-110	145-172							
PMTEI_HERAU	MODIFICATION METHYLASE HGIEI	HERPETOSIPHON AURANTIACUS	281-308								
PMTE2_ECOLI	MODIFICATION METHYLASE ECORII	ESCHERICHIA COLI	4-61								
PMTES_ECOLI	MODIFICATION METHYLASE ECO RV	ESCHERICHIA COLI	73-100								
PMTEC_ENTCL	MODIFICATION METHYLASE ECAI	ENTEROBACTER CLOACAE	418-445								
PMTFI_FLAOK	MODIFICATION METHYLASE FOKI	FLAVOBACTERIUM OKEANOKOITES	184-211	279-306	337-366	398-425	555-646				
PMTFI_FUSNU	MODIFICATION METHYLASE FNUDI	FUSOBACTERIUM NUCLEATUM	22-49								
PMTG2_HAEGA	MODIFICATION METHYLASE HGAI-2	HAEMOPHILUS GALLINARUM	135-165								
PMTH2_HAEIN	MODIFICATION METHYLASE HINCII	HAEMOPHILUS INFLUENZAE	181-208	399-426							
PMTHZ_METTF	MODIFICATION METHYLASE MTHZI	METHANOBACTERIUM THERMOFORMICICUM	188-215	296-323							
PMTKI_KLEPN	MODIFICATION METHYLASE KPNI	KLEBSIELLA PNEUMONIAE	270-297								
PMTLD_STRMU	MANNITOL-1-PHOSPHATE 5-DEHYDROGENASE	STREPTOCOCCUS MUTANS	39-66	224-258	349-376						
PMTM1_MORSP	MODIFICATION METHYLASE MSPI	MORAXELLA SP	5-39	49-104							
PMTN3_NEILA	MODIFICATION METHYLASE NLAIII	NEISSERIA LACTAMICA	124-158	183-210							
PMTP2_PROVU	MODIFICATION METHYLASE PVU II	PROTEUS VULGARIS	308-335								
PMTPG_SULAC	MEMBRANE-ASSOCIATED ATPASE	SULFOLOBUS ACIDOCALDARIUS	9-67								
PMTPS_PROST	MODIFICATION METHYLASE PSTI	PROVIDENCIA STUARTII	226-264								
PMTR_ECOLI	TRYPTOPHAN-SPECIFIC TRANSPORT PROTEIN	ESCHERICHIA COLI	80-107								
PMTS1_STRSA	MODIFICATION METHYLASE STSI	STREPTOCOCCUS SANGUIS	116-153	434-461	600-645						
PMTS2_SHISO	MODIFICATION METHYLASE SSOII	SHIGELLA SONNEI	81-108								
PMTS9_STAAU	MODIFICATION METHYLASE SAU96I	STAPHYLOCOCCUS AUREUS	233-274								
PMTSA_LACLC	MODIFICATION METHYLASE SCRFI-A	LACTOCOCCUS LACTIS	88-115	187-214							
PMTSB_LACLC	MODIFICATION METHYLASE SCRFI-B	LACTOCOCCUS LACTIS	27-61								
PMTSI_SPISQ	CPG DNA METHYLASE	SPIROPLASMA SP	188-230	256-290							
PMTSM_SERMA	MODIFICATION METHYLASE SMAI	SERRATIA MARCESCENS	61-88								
PMTT8_THETH	MODIFICATION METHYLASE TTH1B8I	THERMUS AQUATICUS	120-157								
PMTV1_VIBSJ	MODIFICATION METHYLASE VSPI	VIBRIO SP	23-66								
PMUKD_ECOLI	MUKB PROTEIN	ESCHERICHIA COLI	320-381	1014-1048	1216-1252						
PMULI_ERWAM	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	ERWINIA AMYLOVORA	24-54								
PMULI_MORMO	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	MORGANELA MORGANII	27-54								
PMULI_PROMI	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	PROTEUS MIRABILIS	21-63								
PMURD_BACSU	UDP-LIGASE	BACILLUS SUBTILIS	101-132	299-326							
PMURE_ECOLI	LIGASE	ESCHERICHIA COLI	107-134								
PMURF_ECOLI	UDP-MURNAC-PENTAPEPTIDE SYNTHETASE	ESCHERICHIA COLI	407-437								
PMURZ_ECOLI	ENOYLPYRUVATE TRANSFERASE	ESCHERICHIA COLI	392-419								
PMURZ_ENTCL	ENOYLPYRUVATE TRANSFERASE	ENTEROBACTER CLOACAE	392-419								
PMUTA_STRCM	METHYLMALONYL-COA MUTASE BETA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	31-58								

PCGENE	10?s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMUTB_PROFR	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	PROPIONIBACTERIUM FREUDENREICHII	549-576								
PMUTB_SALTY	AG-SPECIFIC ADENINE GLYCOSYLASE	SALMONELLA TYPHIMURIUM	273-300								
PMUTB_STRCM	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	481-508								
PMUTL_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTL	ESCHERICHIA COLI	80-114								
PMUTL_SALTY	DNA MISMATCH REPAIR PROTEIN MUTL	SALMONELLA TYPHIMURIUM	80-114								
PMUTL_VIBCH	PROTEIN MUTL	VIBRIO CHOLERAE	134-169								
PMUTS_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTS	ESCHERICHIA COLI	119-153								
PMUTT_STRAM	MUTT-LIKE PROTEIN	STREPTOMYCES AMBOFACIENS	60-87								
PMVAA_PSEMV	COENZYME A REDUCTASE	PSEUDOMONAS MEVALONII	341-368								
PMX_STRPY	M-RELATED PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	5-129	148-182	190-217	240-301					
PMYCO_STRCI	MYCOLYSIN PRECURSOR	STREPTOMYCES CACAOI	300-352								
PMYFC_YEREN	MYFC PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	210-237								
PNADC_SALTY	NICOTINATE-NUCLEOTIDE PYROPHOSPHORYLASE	SALMONELLA TYPHIMURIUM	123-154	255-289							
PNADR_SALTY	TRANSCRIPTIONAL REGULATOR NADR	SALMONELLA TYPHIMURIUM	233-260								
PNAGD_ECOLI	NAGD PROTEIN	ESCHERICHIA COLI	75-102								
PNAGH_CLOPE	HYALURONOGLUCOSAMINIDASE	CLOSTRIDIUM PERFRINGENS	48-75	990-1017							
PNAGR_ECOLI	NAGR PROTEIN	ESCHERICHIA COLI	119-153								
PNANH_CLOSE	SIALIDASE PRECURSOR	CLOSTRIDIUM SEPTICUM	11-42	289-330	922-988						
PNANH_CLOSO	SIALIDASE PRECURSOR	CLOSTRIDIUM SORDELLII	377-404								
PNANH_SALTY	SIALIDASE	SALMONELLA TYPHIMURIUM	290-317								
PNAPA_ENTHR	NA(+)/H(+) ANTIPORTER	ENTEROCOCCUS HIRAE	116-150								
PNARG_ECOLI	RESPIRATORY NITRATE REDUCTASE ALPHA CHAIN	ESCHERICHIA COLI	386-420								
PNARL_ECOLI	REGULATOR PROTEIN NARL	ESCHERICHIA COLI	76-103								
PNARP_ECOLI	REGULATOR PROTEIN NARP	ESCHERICHIA COLI	155-189								
PNARX_ECOLI	NITRATE/NITRITE SENSOR PROTEIN NARX	ESCHERICHIA COLI	220-247	358-385	431-458	505-538					
PNDVA_RHIME	BETA-(1-->2)GLUCAN EXPORT PROTEIN	RHIZOBIUM MELILOTI	212-239								
PNEOR_STRCY	NEOMYCIN RESISTANCE PROTEIN	STREPTOMYCES CYANOGENUS	348-375								
PNEUA_ECOLI	ACYLNEURAMINATE CYTIDYLYLTRANSFERASE	ESCHERICHIA COLI	218-252	268-298							
PNFRA_ECOLI	N4 ADSORPTION PROTEIN A PRECURSOR	ESCHERICHIA COLI	490-517								
PNFRB_ECOLI	N4 ADSORPTION PROTEIN B	ESCHERICHIA COLI	2-43	186-220	511-538						
PNFRC_ECOLI	N4 ADSORPTION PROTEIN C	ESCHERICHIA COLI	315-342								
PNFSI_ENTCL	NAD(P)H NITROREDUCTASE	ENTEROBACTER CLOACAE	9-36								
PNHAA_ECOLI	NA(+)/H(+) ANTIPORTER 1	ESCHERICHIA COLI	206-233								
PNHAB_ECOLI	NA(+)/H(+) ANTIPORTER 2	ESCHERICHIA COLI	271-305								
PNHAB_PSECL	NITRILE HYDRATASE SUBUNIT BETA	PSEUDOMONAS CHLORORAPHIS	71-101								
PNHBI_RHORH	NITRILE HYDRATASE SUBUNIT BETA	RHODOCOCCUS RHODOCHROUS	63-93								
PNIFA_AZOBR	NIF-SPECIFIC REGULATORY PROTEIN	AZOSPIRILLUM BRASILENSE	7-44								
PNIFA_BRAJA	NIF-SPECIFIC REGULATORY PROTEIN	BRADYRHIZOBIUM JAPONICUM	252-279								
PNIFA_HERSE	NIF-SPECIFIC REGULATORY PROTEIN	HERBASPIRILLUM SEROPEDICAE	9-51	162-203	327-354						
PNIFA_RHILE	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	100-127								
PNIFA_RHIME	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM MELILOTI	171-198								
PNIFA_RHOCA	NIF-SPECIFIC REGULATORY PROTEIN	RHODOBACTER CAPSULATUS	260-287								
PNIFB_AZOVI	NIFB PROTEIN	AZOTOBACTER VINELANDII	342-369								
PNIFB_KLEPN	NIFB PROTEIN	KLEBSIELLA PNEUMONIAE	154-181								
PNIFD_ANASP	NITROG MOLYBD-IRON PROTEIN	ANABAENA SP	374-401								
PNIFD_AZOBR	NITROG MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	377-404								
PNIFD_PLEBO	NITROG MOLYBD-IRON PROTEIN	PLECTONEMA BORYANUM	387-414								
PNIFD_THIFE	NITROG MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	383-410								
PNIFE_CLOPA	BIOSYNTHESIS PROTEIN NIFE	CLOSTRIDIUM PASTEURIANUM	359-386								
PNIFH_FRASR	NITROGENASE IRON PROTEIN	FRANKIA SP	56-83								
PNIFH_PLEBO	NITROGENASE IRON PROTEIN	PLECTONEMA BORYANUM	267-294								
PNIFK_AZOBR	NITROG MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	430-457								
PNIFK_BRAJA	NITROG MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM JAPONICUM	483-510								
PNIFK_BRASP	NITROG MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM SP	478-505								
PNIFK_CLOPA	NITROG MOLYBD-IRON PROTEIN	CLOSTRIDIUM PASTEURIANUM	227-254								
PNIFK_THIFE	NITROG MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	479-506								
PNIFM_AZOCH	NIFM PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	265-292								

PCGENE	107s178s4	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNIFN_BRAJA	BIOSYNTHESIS PROTEIN NIFN	BRADYRHIZOBIUM JAPONICUM	339-366								
PNIFS_ANASP	NIFS PROTEIN	ANABAENA SP	112-139								
PNIFS_LACDE	NIFS PROTEIN HOMOLOG	LACTOBACILLUS DELBRUECKII	59-86								
PNIFT_AZOVI	NIFT PROTEIN	AZOTOBACTER VINELANDII	6-33								
PNIFU_ANASL	NIFU PROTEIN	ANABAENA SP	7-49								
PNIFU_ANASP	NIFU PROTEIN	ANABAENA SP	148-178								
PNIFU_KLEPN	NIFU PROTEIN	KLEBSIELLA PNEUMONIAE	66-93								
PNIKA_ECOLI	NICKEL TRANSPORT PROTEIN NIKA PRECURSOR	ESCHERICHIA COLI	122-149	282-309	456-483						
PNIKE_ECOLI	NICKEL TRANSPORT PROTEIN NIKE	ESCHERICHIA COLI	177-204								
PNIRB_ECOLI	NITRITE REDUCTASE	ESCHERICHIA COLI	54-81	345-372							
PNIRC_ECOLI	NIRC PROTEIN	ESCHERICHIA COLI	212-239								
PNIRS_PSEST	PSEUDOMONAS CYTOCHROME OXIDASE PRECURSO	PSEUDOMONAS STUTZERI	303-333								
PNISB_LACLA	117 KD MEMBRANE ASSOCIATED PROTEIN	LACTOCOCCUS LACTIS	202-229	287-332	663-697	886-920					
PNISC_LACLA	NISIN BIOSYNTHESIS PROTEIN NISC	LACTOCOCCUS LACTIS	52-92	140-188							
PNIST_LACLA	NISIN TRANSPORT PROTEIN NIST	LACTOCOCCUS LACTIS	223-257	278-305	426-470						
PNIVA_CLOPA	HOMOCITRATE SYNTHASE, ALPHA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	100-127	234-268							
PNIVO_CLOPA	HOMOCITRATE SYNTHASE, OMEGA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	63-94	103-132	213-240	283-310					
PNMPC_ECOLI	PORIN PROTEIN NMPC PRECURSOR	ESCHERICHIA COLI	22-49	69-96	335-362						
PNODC_BRASP	NODULATION PROTEIN C	BRADYRHIZOBIUM SP	3-30								
PNODC_RHILO	NODULATION PROTEIN C	RHIZOBIUM LOTI	286-313								
PNODC_RHILT	NODULATION PROTEIN C	RHIZOBIUM LEGUMINOSARUM	14-48								
PNODF_RHILV	NODULATION PROTEIN F	RHIZOBIUM LEGUMINOSARUM	31-58								
PNODF_RHIMS	NODULATION PROTEIN F	RHIZOBIUM MELILOTI	39-66								
PNODG_RHIME	NODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODG_RHIMS	NODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODL_RHILV	NODULATION PROTEIN L	RHIZOBIUM LEGUMINOSARUM	26-53								
PNODQ_AZOBR	NODULATION PROTEIN Q	AZOSPIRILLUM BRASILENSE	60-87								
PNODT_RHILT	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	104-134	355-382	420-454						
PNODT_RHILV	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	364-391	416-443							
PNODU_RHIFR	NODULATION PROTEIN U	RHIZOBIUM FREDII	506-536								
PNODV_BRAJA	NODULATION PROTEIN V	BRADYRHIZOBIUM JAPONICUM	378-419	739-766							
PNODX_RHILV	NODULATION PROTEIN X	RHIZOBIUM LEGUMINOSARUM	232-259								
PNOLB_RHIFR	NODULATION PROTEIN NOLB	RHIZOBIUM FREDII	133-160								
PNOLR_RHIME	NODULATION PROTEIN NOLR	RHIZOBIUM MELILOTI	88-115								
PNOSD_PSEST	NOSD PROTEIN PRECURSOR	PSEUDOMONAS STUTZERI	319-346								
PNOSR_PSEST	REGULATORY PROTEIN NOSR	PSEUDOMONAS STUTZERI	127-154								
PNOSZ_PSEAE	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS AERUGINOSA	267-294								
PNOSZ_PSEST	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS STUTZERI	557-591								
PNPRE_BACAM	BACILLOLYSIN PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	113-147	217-244							
PNPRE_BACPO	BACILLOLYSIN PRECURSOR	BACILLUS POLYMYXA	57-91	187-228							
PNPRE_BACSU	BACILLOLYSIN PRECURSOR	BACILLUS SUBTILIS	116-146	307-334							
PNQO5_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 21 KD CHAI	PARACOCCUS DENITRIFICANS	4-45								
PNQO9_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 20 KD CHAIN	PARACOCCUS DENITRIFICANS	125-152								
PNRDD_ECOLI	ANAER RIBONUC-TRIPHOS REDUCTASE	ESCHERICHIA COLI	91-125								
PNRFA_ECOLI	CYTOCHROME C552 PRECURSOR	ESCHERICHIA COLI	319-346								
PNRFG_ECOLI	NRFG PROTEIN	ESCHERICHIA COLI	72-111								
PNRL1_RHORH	ALIPHATIC NITRILASE	RHODOCOCCUS RHODOCHROUS	109-136								
PNSR_LACLA	NISIN-RESISTANCE PROTEIN	LACTOCOCCUS LACTIS	52-79	135-162							
PNTCA_ANASP	DNA-BINDING PROTEIN VF1	ANABAENA SP	65-92								
PNTCA_SYNP7	GLOBAL NITROGEN REGULATOR	SYNECHOCOCCUS SP	44-91								
PNTCA_SYNY3	GLOBAL NITROGEN REGULATOR	SYNECHOCYSTIS SP	67-94								
PNTRB_VIBAL	NITROGEN REGULATION PROTEIN NTRB	VIBRIO ALGINOLYTICUS	194-223								
PNTRC_PROVU	NITROGEN REGULATION PROTEIN NR	PROTEUS VULGARIS	385-412								
PNTRC_RHIME	NITROGEN ASSIMILATION REGULATORY PROTEIN	RHIZOBIUM MELILOTI	451-478								
PNU2C_SYNP7	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	80-107								
PNU4C_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	27-54								
PNU5C_SYNP2	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	614-641								

PECGENE	107:11784	Prokaryotic Sequences	AREA 1	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM										
PNUC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	163-190									
PNUC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	169-199									
PNULX_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	46-80									
PNUOG_ECOLI	NADH DEHYDROGENASE I CHAIN G	ESCHERICHIA COLI	368-402									
PNUOL_ECOLI	NADH DEHYDROGENASE I CHAIN L	ESCHERICHIA COLI	10-57	496-523								
PNUON_ECOLI	NADH DEHYDROGENASE I CHAIN N	ESCHERICHIA COLI	392-419									
PNUPC_ECOLI	NUCLEOTIDE PERMEASE	ESCHERICHIA COLI	13-41	134-164	336-333							
PNUSA_ECOLI	NUSA PROTEIN	ESCHERICHIA COLI	21-62									
PNUSB_ECOLI	N UTILIZATION SUBSTANCE PROTEIN B	ESCHERICHIA COLI	17-65	70-97								
PNUSG_ECOLI	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	ESCHERICHIA COLI	141-168									
PNUSG_THEMA	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	THERMOTOGA MARITIMA	203-230									
PNYLB_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250									
PNYLC_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250									
PO16G_BACCE	OLIGO-1,6-GLUCOSIDASE	BACILLUS CEREUS	301-328									
POCCT_AGRT6	OCTOPINE-BINDING PROTEIN T PRECURSOR	AGROBACTERIUM TUMEFACIENS	172-202									
PODO1_AZOVI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	AZOTOBACTER VINELANDII	827-856									
PODO1_BACSU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	BACILLUS SUBTILIS	487-524	809-850								
PODO1_ECOLI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	ESCHERICHIA COLI	6-13									
PODO1_BACSU	DIHYDROLIPOAMIDE SUC-TRANSF COMP	BACILLUS SUBTILIS	30-60									
PODOB_PSEPU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	PSEUDOMONAS PUTIDA	223-254									
PODP1_ECOLI	PYRUVATE DEHYDROGENASE E1 COMPONENT	ESCHERICHIA COLI	624-651									
PODP2_AZOVI	DIHYDROLIPOAMIDE ACETRANS COMP	AZOTOBACTER VINELANDII	518-545									
PODP2_ECOLI	DIHYDROLIPOAMIDE ACETRANS COMP	ESCHERICHIA COLI	14-41	117-144								
PODPA_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	299-333									
PODPA_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	305-332									
PODPB_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	23-50									
PODPB_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	16-50									
POHIE_CHLTR	15 KD CYSTEINE-RICH PROTEIN, SEROVAR E	CHLAMYDIA TRACHOMATIS	38-65									
PONTA1_NEIGO	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA GONORRHOEAE	63-90									
PONTA1_NEIME	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA MENINGITIDIS	339-386									
PONTA2_NEIME	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA MENINGITIDIS	353-380									
PONTB1_NEIGO	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA GONORRHOEAE	63-90									
PONTB1_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90									
PONTB2_NEIGO	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA GONORRHOEAE	63-90									
PONTB2_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90									
PONTB3_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90									
PONTB4_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	24-51	63-90								
PONTB_NEILA	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA LACTAMICA	116-143									
PONTB_NEISI	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA SICCA	24-51	63-90								
PONTC1_ACTPL	OUTER MEMBRANE LIPOPROTEIN PRECURSOR	ACTINOBACILLUS PLEUROPNEUMONIAE	114-151									
PONTP1_HAEIN	OUTER MEMBRANE PROTEIN P1 PRECURSOR	HAEMOPHILUS INFLUENZAE	134-184	303-330	341-368							
PONTP2_HAEIN	OUTER MEMBRANE PROTEIN P2 PRECURSOR	HAEMOPHILUS INFLUENZAE	16-71	220-254	326-353							
PONTP3_NEIGO	OUTER MEMBRANE PROTEIN P.III PRECURSOR	NEISSERIA GONORRHOEAE	14-41									
PONTP7_STAAU	70 KD OUTER MEMBRANE PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	53-80	88-115								
PONTA_THEMA	OUTER MEMBRANE PROTEIN ALPHA PRECURSOR	THERMOTOGA MARITIMA	100-138	151-178	183-249	255-292	303-328	351-385				
PONTC_ECOLI	OUTER MEMBRANE PROTEIN C PRECURSOR	ESCHERICHIA COLI	20-47	64-94								
PONTC_NEIGO	OUTER MEMBRANE PROTEIN P IIC PRECURSOR	NEISSERIA GONORRHOEAE	89-123									
PONTC_SALTI	OUTER MEMBRANE PROTEIN C PRECURSOR	SALMONELLA TYPHI	166-193									
PONTF_ECOLI	OUTER MEMBRANE PROTEIN F PRECURSOR	ESCHERICHIA COLI	21-55	231-258								
PONTH_PHOSP	OMPH PROTEIN	PHOTOBACTERIUM SP	292-319									
PONTT_ECOLI	PROTEASE VII PRECURSOR	ESCHERICHIA COLI	37-64									
POP65_NEIGO	OPACITY PROTEIN OPA65	NEISSERIA GONORRHOEAE	71-111									
POP67_NEIGO	OPACITY PROTEIN OPA67	NEISSERIA GONORRHOEAE	72-109									
POPAA_NEIGO	OPACITY PROTEIN OPA33	NEISSERIA GONORRHOEAE	71-123	140-167								
POPAG_NEIGO	OPACITY PROTEIN OPA34	NEISSERIA GONORRHOEAE	80-107	140-167								
POPAJ_NEIGO	OPACITY PROTEIN OPA38	NEISSERIA GONORRHOEAE	80-107									
POPAJ_NEIGO	OPACITY PROTEIN OPA38	NEISSERIA GONORRHOEAE	71-105									

PCGENE	107x178x4	Prokaryotic Sequences								
FILE_NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
POPAK_NEIGO	OPACITY PROTEIN OPA57	NEISSERIA GONORRHOEAE	71-105								
POPDA_ECOLI	OLIGOPEPTIDASE A	ESCHERICHIA COLI	147-174								
POPDA_SALTY	OLIGOPEPTIDASE A	SALMONELLA TYPHIMURIUM	147-174								
POPDE_PSEAE	TRANSCRIPTION FACTOR OPDE	PSEUDOMONAS AERUGINOSA	64-91								
POPPA_ECOLI	OLIGOPEPTIDE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	402-432								
POPPB_SALTY	OLIGOPEPTIDE PERMEASE PROTEIN OPPB	SALMONELLA TYPHIMURIUM	265-299								
POPRI_NEIME	OPACITY-RELATED PROTEIN POPMI	NEISSERIA MENINGITIDIS	108-135								
POPRJ_NEIME	OPACITY-RELATED PROTEIN POPMJ	NEISSERIA MENINGITIDIS	94-135								
POSMC_ECOLI	OSMOTICALLY INDUCIBLE PROTEIN OSMC	ESCHERICHIA COLI	5-32								
POSPA_BORBU	OUTER SURFACE PROTEIN A PRECURSOR	BORRELIA BURGDORFERI	63-100	112-139	157-204	223-271					
POSPB_BORBU	OUTER SURFACE PROTEIN B PRECURSOR	BORRELIA BURGDORFERI	133-259	262-296							
POTC2_BACSU	ORNITHINE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	188-215								
POTCC_PSEAE	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	17-44								
POTCC_PSEPU	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS PUTIDA	3-33								
POUTB_BACSU	SPORE OUTGROWTH FACTOR B	BACILLUS SUBTILIS	225-252								
POUTO_ERWCA	LEADER PEPTIDASE	ERWINIA CAROTOVORA	189-216								
PP18K_STRPA	18 KD PROTEIN IN FIMA 3'REGION	STREPTOCOCCUS PARASANGUIS	115-149								
PP18K_STRSA	18 KD PROTEIN IN SSAB 3'REGION	STREPTOCOCCUS SANGUIS	10-37	114-148							
PP1P_LACLC	PI-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1466-1496	1625-1655			
PP29_MYCHR	PROTEIN P29	MYCOPLASMA HYORHINIS	5-56	101-160	202-246						
PP2P_LACLA	PII-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1625-1689			
PP2P_LACPA	PII-TYPE PROTEINASE PRECURSOR	LACTOBACILLUS PARACASEI	107-155	904-941	1073-1100	1223-1250	1446-1496	1628-1655			
PP30_ECOLI	P30 PROTEIN	ESCHERICHIA COLI	55-82								
PP34_RICRI	PROTEIN P34	RICKETTSIA RICKETTSII	9-47	135-173							
PP37_MYCHR	PROTEIN P37 PRECURSOR	MYCOPLASMA HYORHINIS	38-75								
PP3P_LACLC	PIII-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1628-1655			
PP47K_PSECL	47 KD PROTEIN	PSEUDOMONAS CHLORORAPHIS	288-315								
PP54_ENTFC	P54 PROTEIN PRECURSOR	ENTEROCOCCUS FAECIUM	58-92	141-209							
PP60_LISGR	PROTEIN P60 PRECURSOR	LISTERIA GRAYI	31-61	101-142	300-334	431-458					
PP60_LISIN	PROTEIN P60 PRECURSOR	LISTERIA INNOCUA	67-94	102-143							
PP60_LISIV	PROTEIN P60 PRECURSOR	LISTERIA IVANOVII	101-140	315-359							
PP60_LISMO	PROTEIN P60 PRECURSOR	LISTERIA MONOCYTOGENES	103-144								
PP60_LISSE	PROTEIN P60 PRECURSOR	LISTERIA SEELIGERI	101-140	270-298	321-365	395-422					
PP60_LISWE	PROTEIN P60 PRECURSOR	LISTERIA WELSHIMERI	113-140	317-361	396-423						
PP69_MYCHR	PROTEIN P69	MYCOPLASMA HYORHINIS	264-295	421-464	487-517	544-575					
PPABA_BACSU	ADC SYNTHASE	BACILLUS SUBTILIS	12-41								
PPABC_BACSU	4-AMINO-4-DEOXYCHORISMATE LYASE	BACILLUS SUBTILIS	250-277								
PPABC_ECOLI	4-AMINO-4-DEOXYCHORISMATE LYASE	ESCHERICHIA COLI	140-167								
PPABL_STRGR	PROTEIN Y	STREPTOMYCES GRISEUS	52-79								
PPAC_ARTVI	PENICILLIN ACYLASE PRECURSOR	ARTHROBACTER VISCOSUS	170-197	333-363	571-606	640-674					
PPAC_BACSH	PENICILLIN ACYLASE	BACILLUS SPHAERICUS	232-259								
PPAC_STRMU	PAC PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	146-276	281-465	538-565	576-630	1075-1102	1159-1186	1381-1434		
PPAI1_BACSU	REGULATORY PROTEIN PAI 1	BACILLUS SUBTILIS	103-137								
PPAI2_BACSU	REGULATORY PROTEIN PAI 2	BACILLUS SUBTILIS	145-172								
PPAPE_ECOLI	FIMBRIAL PROTEIN PAPE	ESCHERICHIA COLI	42-69	86-123							
PPAPF_ECOLI	MINOR FIMBRIAL PROTEIN PAPF	ESCHERICHIA COLI	4-31								
PPAPG_ECOLI	FIMBRIAL PROTEIN PAPG PRECURSOR	ESCHERICHIA COLI	282-316								
PPARA_AGRTU	PARA PROTEIN	AGROBACTERIUM TUMEFACIENS	60-87								
PPARB_ECOLI	PLASMID PARTITION PAR B PROTEIN	ESCHERICHIA COLI	117-154	249-283							
PPARE_ECOLI	TOPOISOMERASE IV SUBUNIT B	ESCHERICHIA COLI	444-471	526-553							
PPARE_SALTY	TOPOISOMERASE IV SUBUNIT B	SALMONELLA TYPHIMURIUM	444-471	526-553							
PPA_BACAN	PROTECTIVE ANTIGEN PRECURSOR	BACILLUS ANTHRACIS	13-52	125-152	296-335	585-615	650-684				
PPBP2_ECOLI	PENICILLIN-BINDING PROTEIN 2	ESCHERICHIA COLI	95-122	178-205	207-241						
PPBP2_NEIGO	PENICILLIN-BINDING PROTEIN 2	NEISSERIA GONORRHOEAE	193-220								
PPBP2_NEIME	PENICILLIN-BINDING PROTEIN 2	NEISSERIA MENINGITIDIS	193-220								
PPBP2_STRPN	PENICILLIN-BINDING PROTEIN 2B	STREPTOCOCCUS PNEUMONIAE	144-183	216-243	259-286	605-632					
PPBP3_ECOLI	PENICILLIN-BINDING PROTEIN 3 PRECURSOR	ESCHERICHIA COLI	224-251	334-368							

PCGENE	107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPBP4_BACSU	PENICILLIN-BINDING PROTEIN 4*	BACILLUS SUBTILIS	374-401								
PPBP4_ECOLI	PENICILLIN-BINDING PROTEIN 4 PRECURSOR	ESCHERICHIA COLI	336-363								
PPBPA_ECOLI	PENICILLIN-BINDING PROTEIN 1A	ESCHERICHIA COLI	145-172								
PPBPB_ECOLI	PENICILLIN-BINDING PROTEIN 1B	ESCHERICHIA COLI	62-96	263-290							
PPBPX_STRPN	PENICILLIN-BINDING PROTEIN 2X	STREPTOCOCCUS PNEUMONIAE	89-116	706-733							
PPBP_STAAU	PENICILLIN-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	78-108	176-203	263-324	502-529					
PPCAB_PSEPU	CYCLOISOMERASE	PSEUDOMONAS PUTIDA	115-142	226-253							
PPEL3_ERWCA	PECTATE LYASE III PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELA_ERWCA	PECTATE LYASE A PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELB_ERWCA	PECTATE LYASE B PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELC_ERWCA	PECTATE LYASE C PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELF_ERWCH	PECTATE LYASE E PRECURSOR	ERWINIA CHRYSANTHEMI	40-67	209-243							
PPELP_ERWCA	PERIPLASMIC PECTATE LYASE PRECURSOR	ERWINIA CAROTOVORA	455-482								
PPELP_YERPS	PERIPLASMIC PECTATE LYASE PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	459-489								
PPELX_ERWCA	PUTATIVE PECTATE LYASE X PRECURSOR	ERWINIA CAROTOVORA	188-218								
PPELX_ERWCH	EXOPOLYGALACTURONATE LYASE PRECURSOR	ERWINIA CHRYSANTHEMI	466-493								
PPEPD_ECOLI	AMINOACYL-HISTIDINE DIPEPTIDASE	ESCHERICHIA COLI	264-314								
PPEPQ_ECOLI	X-PRO DIPEPTIDASE	ESCHERICHIA COLI	251-278								
PPERT_BORBR	PERTACTIN PRECURSOR	BORDETELLA BRONCHISEPTICA	617-644								
PPERT_BORPA	PERTACTIN PRECURSOR	BORDETELLA PARAPERTUSSIS	628-655								
PPERT_BORPE	PERTACTIN PRECURSOR	BORDETELLA PERTUSSIS	616-643								
PPGK_CORGL	PHOSPHOGLYCERATE KINASE	CORYNEBACTERIUM GLUTAMICUM	83-117								
PPGK_ECOLI	PHOSPHOGLYCERATE KINASE	ESCHERICHIA COLI	186-216								
PPGK_METBR	PHOSPHOGLYCERATE KINASE	METHANOBACTERIUM BRYANTII	36-63								
PPGK_THETH	PHOSPHOGLYCERATE KINASE	THERMUS AQUATICUS	222-249								
PPGLI_ERWCA	ENDO-POLYGALACTURONASE PRECURSOR	ERWINIA CAROTOVORA	237-271								
PPGTE_SALTY	OUTER MEMBRANE PROTEASE E PRECURSOR	SALMONELLA TYPHIMURIUM	66-93								
PPHA1_FREDI	C-PHYCOCYANIN-1 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPHA2_FREDI	C-PHYCOCYANIN-2 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPHAA_PSEOL	POLY(3-HYDROXYALKANOATE) POLYMERASE 1	PSEUDOMONAS OLEOVORANS	264-291								
PPHAB_ANACY	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA CYLINDRICA	7-48								
PPHAB_ANAVA	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA VARIABILIS	14-48								
PPHAB_FREDI	ALLOPHYCOCYANIN BETA CHAIN	FREMYELLA DIPLOSIPHON	8-49								
PPHAB_MASLA	ALLOPHYCOCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	14-41								
PPHAB_SYNP6	ALLOPHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	14-41								
PPHAC_SYNP6	ALLOPHYCOCYANIN ALPHA-B CHAIN	SYNECHOCOCCUS SP	33-60								
PPHAG_FREDI	ALLOPHYCOCYANIN GAMMA CHAIN	FREMYELLA DIPLOSIPHON	32-59								
PPHB3_FREDI	C-PHYCOCYANIN-3 BETA CHAIN	FREMYELLA DIPLOSIPHON	29-56								
PPHBD_ALCEU	ACETOACETYL-COA REDUCTASE	ALCALIGENES EUTROPHUS	55-85								
PPHCA_SYNY1	C-PHYCOCYANIN ALPHA CHAIN	SYNECHOCYSTIS SP	21-55								
PPHCB_SYNP6	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPHCB_SYNP7	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPHCB_SYNY1	C-PHYCOCYANIN BETA CHAIN	SYNECHOCYSTIS SP	21-55								
PPHEA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	10-37								
PPHEA_ERWHE	CHORISMATE MUTASE	ERWINIA HERBICOLA	10-37	159-186	252-286						
PPHEA_PSESP	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS SP	171-201	282-314	437-464						
PPHEB_MASLA	PHYCOERYTHROCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	21-62								
PPHEB_PSESP	CATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS SP	24-51								
PPHEG_SYNPY	LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	158-185								
PPHEP_ECOLI	PHENYLALANINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	284-311								
PPHF1_CLOPA	PERIPLASMIC [FE] HYDROGENASE 1	CLOSTRIDIUM PASTEURIANUM	434-471								
PPHL1_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHL2_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHL3_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHLC_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	32-59	179-206							
PPHLC_CLOBI	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM BIFERMENTANS	50-77	335-365							
PPHLC_CLOPE	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM PERFRINGENS	210-237	369-398							

PCGENE	107x178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPHLC_LISMO	PHOSPHOLIPASE C PRECURSOR	LISTERIA MONOCYTOGENES	147-174								
PPHLC_PSEAE	HEMOLYTIC PHOSPHOLIPASE C PRECURSOR	PSEUDOMONAS AERUGINOSA	685-712								
PPHLC_STAAU	PHOSPHOLIPASE C PRECURSOR	STAPHYLOCOCCUS AUREUS	6-33								
PPHLD_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	179-206								
PPHL_LEPIN	SPHINGOMYELINASE C PRECURSOR	LEPTOSPIRA INTERROGANS	30-57	394-428							
PPHND_ECOLI	PHND PROTEIN	ESCHERICHIA COLI	296-326								
PPHNK_ECOLI	PHNK PROTEIN	ESCHERICHIA COLI	178-205								
PPHNM_ECOLI	PHNM PROTEIN	ESCHERICHIA COLI	5-35								
PPHOE_CITFR	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	CITROBACTER FREUNDII	13-40	47-105							
PPHOE_ECOLI	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	ESCHERICHIA COLI	13-40	64-105	168-195	226-253					
PPHOE_KLEOX	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA OXYTOCA	13-40	64-91							
PPHOE_KLEPN	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA PNEUMONIAE	13-40	64-105							
PPHOE_SALTY	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	SALMONELLA TYPHIMURIUM	63-104	320-347							
PPHOP_BACSU	ALK PHOS SYNTHESIS TRANS REG PROTEIN	BACILLUS SUBTILIS	185-219								
PPHOQ_ECOLI	SENSOR PROTEIN PHOQ	ESCHERICHIA COLI	244-278								
PPHOQ_SALTY	VIRULENCE SENSOR PROTEIN PHOQ	SALMONELLA TYPHIMURIUM	226-260								
PPHOR_BACSU	ALK PHOS SYNTHESIS SENSOR PROTEIN PHOR	BACILLUS SUBTILIS	89-145	387-425							
PPHRA_ECOLI	PHOTOREPAIR PROTEIN PHRA	ESCHERICHIA COLI	63-90	207-241							
PPHRA_SYNPY	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHRA_SYNPZ	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHSG_ECOLI	GLYCOGEN PHOSPHORYLASE	ESCHERICHIA COLI	157-184	488-515							
PPHSM_ECOLI	MALTODEXTRIN PHOSPHORYLASE	ESCHERICHIA COLI	71-108								
PPILA_NEIGO	PROB SIGNAL RECOGNITION PARTICLE PROTEIN	NEISSERIA GONORRHOEAE	17-68								
PPILB_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILB	PSEUDOMONAS AERUGINOSA	16-60								
PPILC_PSEAE	PILC PROTEIN	PSEUDOMONAS AERUGINOSA	143-170								
PPILD_NEIGO	LEADER PEPTIDASE	NEISSERIA GONORRHOEAE	110-137								
PPILQ_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILQ PRECURSOR	PSEUDOMONAS AERUGINOSA	71-115	639-666							
PPILS_PSEAE	SENSOR PROTEIN PILS	PSEUDOMONAS AERUGINOSA	9-46								
PPIR_ECOLI	PI PROTEIN	ESCHERICHIA COLI	156-188								
PPIV_MORBO	PILIN GENE INVERTING PROTEIN	MORAXELLA BOVIS	42-69	152-182							
PPIV_MORLA	PILIN GENE INVERTING PROTEIN	MORAXELLA LACUNATA	152-182								
PPLC_BACCE	PHOSPHODIESTERASE PRECURSOR	BACILLUS CEREUS	217-245								
PPLC_BACTU	PHOSPHODIESTERASE PRECURSOR	BACILLUS THURINGIENSIS	216-245								
PPLC_LISMO	PHOSPHODIESTERASE PRECURSOR	LISTERIA MONOCYTOGENES	238-265								
PPLSC_ECOLI	ACYLTRANSFERASE	ESCHERICHIA COLI	106-133								
PPLSX_ECOLI	PLSX PROTEIN	ESCHERICHIA COLI	241-270								
PPLYD_ERWCA	PECTIN LYASE	ERWINIA CAROTOVORA	27-92								
PPMBA_ECOLI	PMBA PROTEIN	ESCHERICHIA COLI	9-50								
PPME_ERWCH	PECTINESTERASE PRECURSOR	ERWINIA CHRYSANTHEMI	60-87								
PPMGY_ECOLI	PHOSPHOGLYCERATE MUTASE	ESCHERICHIA COLI	82-116								
PPMGY_ZYMM	PHOSPHOGLYCERATE MUTASE	ZYMOMONAS MOBILIS	13-40	80-110							
PPNP_ECOLI	POLYRIBONUC NUCLEOTIDYL TRANSF	ESCHERICHIA COLI	260-294								
PPNIK_SALTY	PNIK PROTEIN	SALMONELLA TYPHIMURIUM	178-205								
PPODK_BACSY	PYRUVATE,ORTHOPHOSPHATE DIKINASE	BACTEROIDES SYMBIOSUS	51-78								
PPORF_PSESY	OUTER MEMBRANE PORIN F PRECURSOR	PSEUDOMONAS SYRINGAE	111-138								
PPORO_PSEAE	PORIN O PRECURSOR	PSEUDOMONAS AERUGINOSA	390-424								
PPORP_PSEAE	PORIN P PRECURSOR	PSEUDOMONAS AERUGINOSA	139-181	260-287	369-396						
PPOTD_ECOLI	BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	320-347								
PPOTE_ECOLI	PUTRESCINE-ORNITHINE ANTIPORTER	ESCHERICHIA COLI	91-118								
PPOXB_ECOLI	PYRUVATE DEHYDROGENASE	ESCHERICHIA COLI	8-38								
PPPB3_BACSU	ALKALINE PHOSPHATASE III PRECURSOR	BACILLUS SUBTILIS	109-150	433-460							
PPPB4_BACSU	ALKALINE PHOSPHATASE IV PRECURSOR	BACILLUS SUBTILIS	85-123	336-363							
PPPB_ECOLI	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA COLI	235-262								
PPPB_ESCFE	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA FERGUSONII	236-263								
PPPCE_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199								
PPPCF_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199	256-283							
PPPCK_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYKINASE	ESCHERICHIA COLI	45-72								

PCGENE	107:178:4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPPDA_CLOPE	PROTEIN A PRECURSOR	CLOSTRIDIUM PERFRINGENS	73-107								
PPPSA_ECOLI	PHOSPHOENOLPYRUVATE SYNTHASE	ESCHERICHIA COLI	49-76								
PPQQ2_ACICA	COENZYME PQQ SYNTHESIS PROTEIN II	ACINETOBACTER CALCOACETICUS	40-74								
PPRCA_ANAVA	CALCIUM DEPENDENT PROTEASE PRECURSOR	ANABAENA VARIABILIS	371-398								
PPRCA_THEAC	PROTEASOME, ALPHA SUBUNIT	THERMOPLASMA ACIDOPHILUM	88-115								
PPRC_ECOLI	TAIL-SPECIFIC PROTEASE PRECURSOR	ESCHERICHIA COLI	158-192	366-393							
PPRE1_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	27-78	152-179	264-347						
PPRE2_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	48-75	181-208	310-361	366-393					
PPREA_LACPL	PLASMID RECOMBINATION ENZYME	LACTOBACILLUS PLANTARUM	37-71	291-318							
PPRE_BACLI	REGULATORY PROTEIN	BACILLUS LICHENIFORMIS	2-40								
PPRE_BACSP	PLASMID RECOMBINATION ENZYME	BACILLUS SP	181-224	288-345							
PPRE_STRAG	PLASMID RECOMBINATION ENZYME	STREPTOCOCCUS AGALACTIAE	285-319	332-359	420-454						
PPRFA_LISMO	LISTERIOLYSIN REGULATORY PROTEIN	LISTERIA MONOCYTOGENES	76-110	173-204							
PPRIA_ECOLI	PRIMOSOMAL PROTEIN N'	ESCHERICHIA COLI	218-245								
PPRIM_BACSU	DNA PRIMASE	BACILLUS SUBTILIS	383-433								
PPRIM_BUCAP	DNA PRIMASE	BUCHNERA APHIDICOLA	13-43	282-319							
PPRIM_CLOAB	DNA PRIMASE	CLOSTRIDIUM ACETOBUTYLICUM	87-114								
PPRIM_LACLA	DNA PRIMASE	LACTOCOCCUS LACTIS	269-296								
PPRIM_RICPR	DNA PRIMASE	RICKETTSIA PROWAZEKII	10-37	245-286	477-504	526-593					
PPRIS_DESDE	PRISMANE PROTEIN	DESULFOVIBRIO DESULFURICANS	30-57								
PPRLB_ACHLY	BETA-LYTIC METALLOENDOPEPTIDASE	ACHROMOBACTER LYTICUS	317-344								
PPRLB_LYSEN	BETA-LYTIC METALLOENDOPEPTIDASE	LYSOBACTER ENZYMOGENES	121-148								
PPRO1_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145	275-316							
PPRO2_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145								
PPROA_SERMA	GAMMA-GLUTAMYL PHOSPHATE REDUCTASE	SERRATIA MARCESCENS	309-336								
PPROA_STAAU	PROTEIN A PRECURSOR	STAPHYLOCOCCUS AUREUS	2-29								
PPROB_SERMA	GLUTAMATE 5-KINASE	SERRATIA MARCESCENS	7-34								
PPROB_STRAG	PROTEIN B	STREPTOCOCCUS AGALACTIAE	58-85								
PPROC_PSEAE	PYRROLINE-5-CARBOXYLATE REDUCTASE	PSEUDOMONAS AERUGINOSA	148-175								
PPROH_BACSU	PYRROLINE-5-CARBOXYLATE REDUCTASE HOMOL	BACILLUS SUBTILIS	200-227								
PPROP_ECOLI	PROLINE/BETAINE TRANSPORTER	ESCHERICHIA COLI	460-487								
PPROV_ECOLI	PERIPHERAL MEMBRANE PROTEIN PROV	ESCHERICHIA COLI	24-54								
PPROV_SALTY	PERIPHERAL MEMBRANE PROTEIN PROV	SALMONELLA TYPHIMURIUM	24-54								
PPRRB_ECOLI	PRRB PROTEIN	ESCHERICHIA COLI	170-197								
PPRRC_ECOLI	ANTICODON NUCLEASE	ESCHERICHIA COLI	282-309								
PPRRD_ECOLI	PRRD PROTEIN	ESCHERICHIA COLI	278-305								
PPRSA_BACSU	PROTEIN EXPORT PROTEIN PRSA PRECURSOR	BACILLUS SUBTILIS	52-87	95-157							
PPRTA_STRGR	PROTEASE A PRECURSOR	STREPTOMYCES GRISEUS	56-110								
PPRTC_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	103-130								
PPRTC_PORGI	COLLAGENASE PRECURSOR	PORPHYROMONAS GINGIVALIS	285-312								
PPRTD_ERWCH	PROTEASES SECRETION PROTEIN PRTD	ERWINIA CHRYSANTHEMI	328-355								
PPRTE_BACNO	EXTRACELLULAR SERINE PROTEASE PRECURSOR	BACTEROIDES NODOSUS	106-133	219-265	346-384						
PPRTE_ERWCH	PROTEASES SECRETION PROTEIN PRTE	ERWINIA CHRYSANTHEMI	108-135	158-192	231-290						
PPRTF_ERWCH	PROTEASES SECRETION PROTEIN PRTF	ERWINIA CHRYSANTHEMI	280-310								
PPRTM_LACLA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	76-103	112-139							
PPRTM_LACLC	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	26-53	76-103	112-139						
PPRTM_LACPA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOBACILLUS PARACASEI	76-103	112-139							
PPRTS_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	576-607	1007-1041						
PPRTT_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	464-491	1007-1041						
PPRTX_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	314-341								
PPSAA_SYNEN	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS ELONGATUS NAEGEL	120-147								
PPSAA_SYNP2	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS SP	109-136	326-356							
PPSAA_SYNVU	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS VULCANUS	120-147								
PPSAA_SYNY3	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCYSTIS SP	44-71	120-147	338-368						
PPSAD_YERPE	CHAPERONE PROTEIN PSAD PRECURSOR	YERSINIA PESTIS	244-271								
PPSAD_SYNP6	PHOTOSYSTEM I REACTION CENTRE SUBUNIT II	SYNECHOCOCCUS SP	11-38								
PPSAE_YERPE	PSAE PROTEIN PRECURSOR	YERSINIA PESTIS	66-118								

PCGENE	107s178s4	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPSBO_ANANI	STABILIZING POLYPEPTIDE PRECURSOR	ANACYSTIS NIDULANS	99-126	209-243							
PPSPA_ECOLI	PHAGE SHOCK PROTEIN A	ESCHERICHIA COLI	55-82								
PPSRA_WOLSU	POLYSULFIDE REDUCTASE CHAIN A PRECURSOR	WOLINELLA SUCCINOGENES	114-141								
PPSTS_ECOLI	PHOSPHATE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	40-74								
PPTI_BACSU	PHOSPHOTRANSFERASE	BACILLUS SUBTILIS	26-60								
PPTI_ECOLI	PHOSPHOTRANSFERASE	ESCHERICHIA COLI	135-162	399-426							
PPTI_SALTY	PHOSPHOTRANSFERASE	SALMONELLA TYPHIMURIUM	232-259	399-426							
PPTI_STACA	PHOSPHOTRANSFERASE	STAPHYLOCOCCUS CARNOSUS	34-61								
PPTI_STRSL	PHOSPHOTRANSFERASE	STREPTOCOCCUS SALIVARIUS	34-61	198-232							
PPT2B_ERWCH	PHOSPHOTRANSFERASE ENZYME II	ERWINIA CHRYSANTHEMI	127-154								
PPT2G_BACSU	PHOSPHOTRANSFERASE ENZYME II	BACILLUS SUBTILIS	670-697								
PPT2L_LACCA	PHOSPHOTRANSFERASE ENZYME II	LACTOBACILLUS CASEI	537-564								
PPT2L_LACLA	PHOSPHOTRANSFERASE ENZYME II	LACTOCOCCUS LACTIS	183-214	409-436							
PPT2L_STAAU	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS AUREUS	421-448	530-557							
PPT2M_ECOLI	PHOSPHOTRANSFERASE ENZYME II	ESCHERICHIA COLI	445-489								
PPT2M_STACA	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS CARNOSUS	388-415								
PPT2N_ECOLI	N-ACETYLGLUCOSAMINE-PERMEASE	ESCHERICHIA COLI	370-400								
PPT2S_STRMU	PHOSPHOTRANSFERASE ENZYME II	STREPTOCOCCUS MUTANS	600-627								
PPT3F_SALTY	PHOSPHOTRANSFERASE FPR PROTEIN	SALMONELLA TYPHIMURIUM	107-134								
PPT3L_LACCA	PHOSPHOTRANSFERASE FACTOR III	LACTOBACILLUS CASEI	40-67								
PPTHP_ECOLI	PHOSPHOCARRIER PROTEIN HPR	ESCHERICHIA COLI &	31-65								
		SALMONELLA TYPHIMURIUM									
PPTHP_KLEPN	PHOSPHOCARRIER PROTEIN HPR	KLEBSIELLA PNEUMONIAE	31-65								
PPTRB_ECOLI	PROTEASE II	ESCHERICHIA COLI	94-121	217-251							
PPULA_KLEAE	PULLULANASE	KLEBSIELLA AEROGENES	894-928								
PPULA_KLEPN	PULLULANASE	KLEBSIELLA PNEUMONIAE	894-918								
PPULO_KLEPN	LEADER PEPTIDASE	KLEBSIELLA PNEUMONIAE	178-205								
PPULS_KLEPN	PULS PRECURSOR	KLEBSIELLA PNEUMONIAE	70-97								
PPUPA_PSEPU	UPTAKE PROTEIN PRECURSOR	PSEUDOMONAS PUTIDA	112-162	210-237	429-463	736-763					
PPURI_BACSU	AMIDOPHOSPHORIBOSYLTRANSF PREC	BACILLUS SUBTILIS	394-421								
PPUR2_BACSU	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE	BACILLUS SUBTILIS	349-376								
PPUR3_BACSU	FORMYLTRANSFERASE	BACILLUS SUBTILIS	149-176								
PPUR3_ECOLI	FORMYLTRANSFERASE	ESCHERICHIA COLI	27-54								
PPUR4_BACSU	SYNTHASE I	BACILLUS SUBTILIS	18-45								
PPUR5_BACSU	CYCLO-LIGASE	BACILLUS SUBTILIS	153-194								
PPUR6_ECOLI	AIR CARBOXYLASE	ESCHERICHIA COLI	131-158								
PPUR7_BACSU	SAICAR SYNTHETASE	BACILLUS SUBTILIS	3-43								
PPUR8_BACSU	ADENYLOSUCCINATE LYASE	BACILLUS SUBTILIS	56-130	226-253							
PPUR8_ECOLI	ADENYLOSUCCINATE LYASE	ESCHERICHIA COLI	194-221	331-372							
PPUR9_BACSU	AICAR TRANSFORMYLASE	BACILLUS SUBTILIS	19-53	345-372							
PPUR9_ECOLI	AICAR TRANSFORMYLASE	ESCHERICHIA COLI	239-268								
PPUR9_SALTY	AICAR TRANSFORMYLASE	SALMONELLA TYPHIMURIUM	218-247								
PPURL_BACSU	SYNTHASE II	BACILLUS SUBTILIS	609-636								
PPYG1_ANASP	LINKER POLYPEPTIDE CPCG1	ANABAENA SP	88-115								
PPYG1_MASLA	LINKER POLYPEPTIDE CPCG1	MASTIGOCLADUS LAMINOSUS	89-116								
PPYG2_ANASP	LINKER POLYPEPTIDE CPCG2	ANABAENA SP	88-115								
PPYG2_MASLA	LINKER POLYPEPTIDE CPCG2	MASTIGOCLADUS LAMINOSUS	89-116								
PPYG3_MASLA	LINKER POLYPEPTIDE CPCG3	MASTIGOCLADUS LAMINOSUS	91-132								
PPYG4_ANASP	LINKER POLYPEPTIDE CPCG4	ANABAENA SP	90-131								
PPYR1_ANASP	32.1 KD LINKER POLYPEPTIDE	ANABAENA SP	35-62								
PPYR2_FREDI	27.9 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	105-132								
PPYR4_FREDI	31.6 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	22-66								
PPYR5_FREDI	37.5 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	106-143								
PPYR6_FREDI	30.8 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	43-70	113-140							
PPYRB_BACSU	ASPARTATE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	9-36								
PPYRB_SERMA	ASPARTATE CARBAMOYLTRANSFERASE	SERRATIA MARCESCENS	70-97								
PPYRD_ECOLI	DIHYDROOROTATE DEHYDROGENASE	ESCHERICHIA COLI	115-142								

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PCGENE	107s17804	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPYRD_SALTY	DIHYDROOROTATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	115-142	183-210							
PPYRG_BACSU	CTP SYNTHASE	BACILLUS SUBTILIS	275-302	322-349							
PPYSI_FREDI	PHYCOBILISOME 9 7 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	21-48								
PQOR_ECOLI	QUINONE OXIDOREDUCTASE	ESCHERICHIA COLI	180-215								
PQUEA_ECOLI	QUEUOSINE BIOSYNTHESIS PROTEIN QUEA	ESCHERICHIA COLI	234-261								
PRJ4K_CLOPA	34 2 KD PROTEIN IN RUBREDOXIN OPERON	CLOSTRIDIUM PASTEURIANUM	23-50	157-232							
PRACC_ECOLI	RACC PROTEIN	ESCHERICHIA COLI	5-32								
PRACD_STRTR	ASPARTATE RACEMASE	STREPTOCOCCUS THERMOPHILUS	152-189								
PRACX_BACSU	PROBABLE AMINO ACID RACEMASE	BACILLUS SUBTILIS	132-162								
PRAFA_ECOLI	ALPHA-GALACTOSIDASE	ESCHERICHIA COLI	89-116								
PRAFD_ECOLI	RAFFINOSE INVERTASE	ESCHERICHIA COLI	348-375								
PRBSC_ECOLI	RIBOSE TRANSPORT SYSTEM COMPONENT	ESCHERICHIA COLI	65-99	195-222							
PRBSK_ECOLI	RIBOKINASE	ESCHERICHIA COLI	200-239								
PRBTR_KLEAE	RIBITOL (RBT) OPERON REPRESSOR	KLEBSIELLA AEROGENES	6-47								
PRCSA_ECOLI	BIOSYNTHESIS ACTIVATION PROTEIN A	ESCHERICHIA COLI	170-197								
PRCSA_ERWAM	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA AMYLOVORA	92-119	174-201							
PRCSA_ERWST	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA STEWARTII	174-201								
PRCSA_KLEAE	BIOSYNTHESIS ACTIVATION PROTEIN A	KLEBSIELLA AEROGENES	168-205								
PRCSB_ECOLI	CAPSULE SYNTHESIS B COMPONENT	ESCHERICHIA COLI	14-41	159-186							
PRECI_LEGPN	RECA PROTEIN	LEGIONELLA PNEUMOPHILA	262-310								
PRECA_ACHLA	RECA PROTEIN	ACHOLEPLASMA LAIDLAWII	283-310								
PRECA_AGRTU	RECA PROTEIN	AGROBACTERIUM TUMEFACIENS	3-30	132-159	281-308						
PRECA_ANAVA	RECA PROTEIN	ANABAENA VARIABILIS	322-349								
PRECA_AQUPY	RECA PROTEIN	AQUIFEX PYROPHILUS	63-90	126-153							
PRECA_BACFR	RECA PROTEIN	BACTEROIDES FRAGILIS	108-135								
PRECA_BACSU	RECE PROTEIN	BACILLUS SUBTILIS	267-294								
PRECA_BRUAB	RECA PROTEIN	BRUCELLA ABORTUS	3-30	132-159	280-307						
PRECA_BURCE	RECA PROTEIN	BURKHOLDERIA CEPACIA	75-109								
PRECA_ERWCA	RECA PROTEIN	ERWINIA CAROTOVORA	284-311								
PRECA_LACDE	RECA PROTEIN	LACTOBACILLUS DELBRUECKII	20-47								
PRECA_LACHE	RECA PROTEIN	LACTOBACILLUS HELVETICUS	20-47								
PRECA_LACLA	RECA PROTEIN	LACTOCOCCUS LACTIS	135-162	232-269	288-315						
PRECA_METCL	RECA PROTEIN	METHYLOMONAS CLARA	266-303								
PRECA_METFL	RECA PROTEIN	METHYLOBACILLUS FLAGELLATUM	276-303								
PRECA_MYCPU	RECA PROTEIN	MYCOPLASMA PULMONIS	30-57								
PRECA_MYCTU	RECA PROTEIN	MYCOBACTERIUM TUBERCULOSIS	749-776								
PRECA_NEIGO	RECA PROTEIN	NEISSERIA GONORRHOEAE	263-310								
PRECA_PROMI	RECA PROTEIN	PROTEUS MIRABILIS	283-310								
PRECA_PSEAE	RECA PROTEIN	PSEUDOMONAS AERUGINOSA	282-309								
PRECA_RHILP	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	3-30	131-158	280-307						
PRECA_RHILV	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	119-146	268-295							
PRECA_RHIME	RECA PROTEIN	RHIZOBIUM MELILOTI	119-146	268-295							
PRECA_RHOSH	RECA PROTEIN	RHODOBACTER SPHAEROIDES	119-146								
PRECA_STRPN	RECA PROTEIN	STREPTOCOCCUS PNEUMONIAE	134-161	293-327							
PRECA_SYNP2	RECA PROTEIN	SYNECHOCOCCUS SP	124-151								
PRECA_VIBCH	RECA PROTEIN	VIBRIO CHOLERAE	290-317								
PRECF_BACSU	RECF PROTEIN	BACILLUS SUBTILIS	4-31	178-205							
PRECF_ECOLI	RECF PROTEIN	ESCHERICHIA COLI	82-109	147-174							
PRECF_PROMI	RECF PROTEIN	PROTEUS MIRABILIS	86-113								
PRECF_PSEPU	RECF PROTEIN	PSEUDOMONAS PUTIDA	84-111								
PRECF_SALTY	RECF PROTEIN	SALMONELLA TYPHIMURIUM	147-174								
PRECJ_ECOLI	EXONUCLEASE RECJ	ESCHERICHIA COLI	52-79								
PRECN_BACSU	RECOMBINATION PROTEIN	BACILLUS SUBTILIS	21-48	156-184	192-247	299-336	344-378				
PRECQ_ECOLI	DNA HELICASE RECQ	ESCHERICHIA COLI	468-495								
PRELA_ECOLI	GTP PYROPHOSPHOKINASE	ESCHERICHIA COLI	680-707								
PREMA_BACSU	REPLICATION AND MAINTENANCE PROTEIN	BACILLUS SUBTILIS	2-36	81-108							
PREMA_STAAU	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS AUREUS	2-36	81-108							

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PREMA_STAEP	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	2-36	81-108							
PREP3_ECOLI	REPLICATION PROTEIN REPA	ESCHERICHIA COLI	50-77	90-117							
PREPA_BACSU	REPA PROTEIN	BACILLUS SUBTILIS	342-373								
PREPA_ECOLI	REPA PROTEIN	ESCHERICHIA COLI	91-118	228-255							
PREPA_NEIGO	REPLICATION PROTEIN	NEISSERIA GONORRHOEAE	57-84	138-172							
PREPB_LACPL	REPLICATION PROTEIN REPB	LACTOBACILLUS PLANTARUM	184-211								
PREPM_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	254-284								
PREPN_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	258-285								
PREPR_STRAG	REPR PROTEIN	STREPTOCOCCUS AGALACTIAE	430-467								
PREPS_STRPY	REPS PROTEIN	STREPTOCOCCUS PYOGENES	423-467								
PREPX_STAAU	REP PROTEIN	STAPHYLOCOCCUS AUREUS	111-150	172-210							
PREPY_ECOLI	REPLICATION INITIATION PROTEIN	ESCHERICHIA COLI	288-315								
PREP_CLOPE	REPLICATION PROTEIN	CLOSTRIDIUM PERFRINGENS	168-195	297-324	343-375						
PREP_ECOLI	REP HELICASE	ESCHERICHIA COLI	119-146	205-243							
PREP_LACPL	REP PROTEIN	LACTOBACILLUS PLANTARUM	119-199	260-287							
PRESP_CLOPE	RESOLVASE	CLOSTRIDIUM PERFRINGENS	68-102	151-185							
PRF1_BACSU	PROBABLE PEPTIDE CHAIN RELEASE FACTOR 2	BACILLUS SUBTILIS	34-68								
PRF2_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 2	ESCHERICHIA COLI	86-113	163-204							
PRF2_SALTY	PEPTIDE CHAIN RELEASE FACTOR 2	SALMONELLA TYPHIMURIUM	86-113	163-204							
PRF3_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 3	ESCHERICHIA COLI	180-210	443-473							
PRFAB_ECOLI	1,6-GALACTOSYLTRANSFERASE	ESCHERICHIA COLI	199-226								
PRFAG_ECOLI	BIOSYNTHESIS PROTEIN RFAG	ESCHERICHIA COLI	185-212								
PRFAJ_ECOLI	1,2-GLUCOSYLTRANSFERASE	ESCHERICHIA COLI	39-66	233-268							
PRFAJ_SALTY	1,2-GLUCOSYLTRANSFERASE	SALMONELLA TYPHIMURIUM	68-95	145-172	236-263						
PRFAK_SALTY	1,2-N-ACETYLGLUCOSAMINETRANSFERASE	SALMONELLA TYPHIMURIUM	335-369								
PRFAL_ECOLI	O-ANTIGEN LIGASE	ESCHERICHIA COLI	366-393								
PRFAL_SALTY	O-ANTIGEN LIGASE	SALMONELLA TYPHIMURIUM	326-360								
PRFAP_ECOLI	BIOSYNTHESIS PROTEIN RFAP	ESCHERICHIA COLI	8-35								
PRFAS_ECOLI	BIOSYNTHESIS PROTEIN RFAS	ESCHERICHIA COLI	62-89	184-240							
PRFAY_ECOLI	BIOSYNTHESIS PROTEIN RFAY	ESCHERICHIA COLI	18-45								
PRFAZ_ECOLI	BIOSYNTHESIS PROTEIN RFAZ	ESCHERICHIA COLI	3-30	85-112							
PRFBB_SALTY	DTDP-GLUCOSE 4,6-DEHYDRATASE	SALMONELLA TYPHIMURIUM	320-359								
PRFBM_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	313-361								
PRFBS_SALTI	PARATOSE SYNTHASE	SALMONELLA TYPHI	22-56	205-232							
PRFEA_VIBAN	PRECURSOR FOR FERRIC ANGUIBACTIN	VIBRIO ANGUILLARUM	349-376								
PRFH_ECOLI	PEPTIDE CHAIN RELEASE FACTOR HOMOLOG	ESCHERICHIA COLI	83-110								
PRGI2_BACTU	PUTATIVE GI2 SITE-SPECIFIC RECOMBINASE	BACILLUS THURINGIENSIS	15-68	190-262	310-383						
PRHAB_ECOLI	RHAMNULOKINASE	ESCHERICHIA COLI	175-202								
PRHAB_SALTY	RHAMNULOKINASE	SALMONELLA TYPHIMURIUM	175-202								
PRHAR_ECOLI	L-RHAMNOSE OPERON TRANSACTIVATOR	ESCHERICHIA COLI	10-41								
PRHAS_ECOLI	L-RHAMNOSE OPERON REG PROTEIN RHAS	ESCHERICHIA COLI	152-179								
PRHIR_RHILV	RHIR REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	206-233								
PRHLB_ECOLI	RNA HELICASE RHLB/DEAD/RA	ESCHERICHIA COLI	138-165								
PRHO_BORBU	TRANS TERM FACTOR RHO	BORRELIA BURGDORFERI	215-242	327-369							
PRHPR_BACSU	PROTEASE PROD REG PROTEIN HPR	BACILLUS SUBTILIS	82-109								
PRHSA_ECOLI	RHSA PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSB_ECOLI	RHSB PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSC_ECOLI	RHSC PROTEIN PRECURSOR	ESCHERICHIA COLI	380-414	667-694	1056-1083						
PRHSD_ECOLI	RHSD PROTEIN PRECURSOR	ESCHERICHIA COLI	671-712	1071-1098							
PRHSE_ECOLI	RHSE PROTEIN	ESCHERICHIA COLI	345-372								
PRIAL_ECOLI	ACETYLTRANSFERASE	ESCHERICHIA COLI	93-127								
PRIRJ_ECOLI	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	ESCHERICHIA COLI	167-194								
PRISA_PHOLE	RIBOFLAVIN SYNTHASE ALPHA CHAIN	PHOTOBACTERIUM LEIOGNATHI	2-47	131-158							
PRISB_BACSU	RIBOFLAVIN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	8-35								
PRISB_PHOLE	RIBOFLAVIN SYNTHASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	14-41								
PRL10_STRAT	50S RIBOSOMAL PROTEIN L10	STREPTOMYCES ANTIBIOTICUS	14-72	106-133							
PRL12_SYNY3	50S RIBOSOMAL PROTEIN L12	SYNECHOCYSTIS SP	2-34								

PCGENE	107:1734	Prokaryotic Sequences	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	ORGANISM	8-35	36-86						
PRL12_THEMA	50S RIBOSOMAL PROTEIN L12	THERMOTOGA MARITIMA	8-35							
PRL12_THEMA	50S RIBOSOMAL PROTEIN L12	THERMOTOGA MARITIMA	18-45							
PRL14_BACST	50S RIBOSOMAL PROTEIN L14	BACILLUS STEAROTHERMOPHILUS	18-45							
PRL14_MICLU	50S RIBOSOMAL PROTEIN L14	MICROCOCCUS LUTEUS	18-45							
PRL14_MYCCA	50S RIBOSOMAL PROTEIN L14	MYCOPLASMA CAPRICOLUM	31-92							
PRL13_BACLI	50S RIBOSOMAL PROTEIN L13	BACILLUS LICHENIFORMIS	21-48							
PRL13_BACST	50S RIBOSOMAL PROTEIN L13	BACILLUS STEAROTHERMOPHILUS	95-134							
PRL13_BACSU	50S RIBOSOMAL PROTEIN L13	BACILLUS SUBTILIS	95-122							
PRL15_CHLTR	50S RIBOSOMAL PROTEIN L15	CHLAMYDIA TRACHOMATIS	110-144							
PRL15_ECOLI	50S RIBOSOMAL PROTEIN L15	ESCHERICHIA COLI	79-113							
PRL15_LACLA	50S RIBOSOMAL PROTEIN L15	LACTOCOCCUS LACTIS	8-35							
PRL15_METVA	50S RIBOSOMAL PROTEIN L15	METHANOCOCCUS VANNIELII	68-102							
PRL15_MYCCA	50S RIBOSOMAL PROTEIN L15	MYCOPLASMA CAPRICOLUM	63-135							
PRL11_BACST	50S RIBOSOMAL PROTEIN L11	BACILLUS STEAROTHERMOPHILUS	31-58							
PRL11_CHLTR	50S RIBOSOMAL PROTEIN L11	CHLAMYDIA TRACHOMATIS	32-86							
PRL11_HALMA	50S RIBOSOMAL PROTEIN L11	HALOARCULA MARISMORTUI	80-107							
PRL11_MYCCA	50S RIBOSOMAL PROTEIN L11	MYCOPLASMA CAPRICOLUM	61-88							
PRL19_ECOLI	50S RIBOSOMAL PROTEIN L19	ESCHERICHIA COLI	25-52							
PRL19_HALMA	50S RIBOSOMAL PROTEIN L19	HALOARCULA MARISMORTUI	101-128							
PRL19_METVA	PROBABLE 50S RIBOSOMAL PROTEIN	METHANOCOCCUS VANNIELII	45-72							
PRL1_PROVU	50S RIBOSOMAL PROTEIN L1	PROTEUS VULGARIS	139-194							
PRL1_SULSO	50S RIBOSOMAL PROTEIN L1	SULFOLOBUS SOLFATARICUS	5-32	184-211						
PRL20_ECOLI	50S RIBOSOMAL PROTEIN L20	ESCHERICHIA COLI	14-41							
PRL20_MYCFE	50S RIBOSOMAL PROTEIN L20	MYCOPLASMA FERMENTANS	14-41							
PRL21_BACSU	50S RIBOSOMAL PROTEIN L21	BACILLUS SUBTILIS	4-38							
PRL22_ECOLI	50S RIBOSOMAL PROTEIN L22	ESCHERICHIA COLI	28-55							
PRL22_METVA	50S RIBOSOMAL PROTEIN L22	METHANOCOCCUS VANNIELII	30-57							
PRL22_MYCCA	50S RIBOSOMAL PROTEIN L22	MYCOPLASMA CAPRICOLUM	32-59							
PRL24_HALMA	50S RIBOSOMAL PROTEIN L24	HALOARCULA MARISMORTUI	48-75							
PRL24_METVA	50S RIBOSOMAL PROTEIN L24	METHANOCOCCUS VANNIELII	61-90							
PRL24_MICLU	50S RIBOSOMAL PROTEIN L24	MICROCOCCUS LUTEUS	36-63							
PRL29_CHLTR	50S RIBOSOMAL PROTEIN L29	CHLAMYDIA TRACHOMATIS	39-66							
PRL29_ECOLI	50S RIBOSOMAL PROTEIN L29	ESCHERICHIA COLI	36-63							
PRL29_MYCCA	50S RIBOSOMAL PROTEIN L29	MYCOPLASMA CAPRICOLUM	39-85							
PRL4_BACST	50S RIBOSOMAL PROTEIN L4	BACILLUS STEAROTHERMOPHILUS	141-168							
PRL4_MYCCA	50S RIBOSOMAL PROTEIN L4	MYCOPLASMA CAPRICOLUM	144-198							
PRL3_THETH	50S RIBOSOMAL PROTEIN L3	THERMUS AQUATICUS	38-65							
PRL6_BACST	50S RIBOSOMAL PROTEIN L6	BACILLUS STEAROTHERMOPHILUS	79-106							
PRL6_ECOLI	50S RIBOSOMAL PROTEIN L6	ESCHERICHIA COLI	19-46							
PRL6_METVA	50S RIBOSOMAL PROTEIN L6	METHANOCOCCUS VANNIELII	129-159							
PRL9_BACST	50S RIBOSOMAL PROTEIN L9	BACILLUS STEAROTHERMOPHILUS	47-77							
PRL9_ECOLI	50S RIBOSOMAL PROTEIN L9	ESCHERICHIA COLI	122-149							
PRLA0_HALCU	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	HALOBACTERIUM CUTIRUBRUM	138-182							
PRLA0_HALHA	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	HALOBACTERIUM HALOBIUM	138-182							
PRLA0_HALMA	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	HALOARCULA MARISMORTUI	64-91	153-184						
PRLA0_METVA	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	METHANOCOCCUS VANNIELII	194-221							
PRLA_HALEU	RIBOSOMAL PROTEIN 'A'	HALOPHILIC EUBACTERIUM NRCC 41227	59-86							
PRLA_HALHA	50S RIBOSOMAL PROTEIN L20	HALOBACTERIUM HALOBIUM	2-29							
PRLA_HALMA	50S RIBOSOMAL PROTEIN L12	HALOARCULA MARISMORTUI	2-29							
PRLA_METVA	RIBOSOMAL PROTEIN 'A'	METHANOCOCCUS VANNIELII	2-29							
PRLA_MICLU	70S RIBOSOMAL PROTEIN MA	MICROCOCCUS LUTEUS	53-82	90-117						
PRLX1_SALTY	41 KD RELAXATION PROTEIN	SALMONELLA TYPHIMURIUM	3-30	102-132	177-218	266-300				
PRLX1_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	19-53							
PRLX2_SALTY	21 KD RELAXATION PROTEIN	SALMONELLA TYPHIMURIUM	3-30	102-133	261-295					
PRLX2_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	146-216						
PRLX3_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30							
PRLX_SULSO	50S RIBOSOMAL PROTEIN LX	SULFOLOBUS SOLFATARICUS	32-62							
PRNTR_HACAM	RIBONUCLEASE P PRECURSOR	HACILLUS AMYLOLIQUEFACIENS	93-67	129-156						

PCGENE	10?a17Bc4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRNC_ECOLI	RIBONUCLEASE III	ESCHERICHIA COLI	10-37	117-144							
PRNE_ECOLI	RIBONUCLEASE E	ESCHERICHIA COLI	413-440	628-662							
PRNPA_BUCAP	RIBONUCLEASE P PROTEIN COMPONENT	BUCHNERA APHIDICOLA	85-114								
PRNPH_BACSU	RIBONUCLEASE PH	BACILLUS SUBTILIS	159-186								
PRNS_ECOLI	REGULATORY PROTEIN RNS	ESCHERICHIA COLI	116-160								
PRN_BACCI	RIBONUCLEASE	BACILLUS CIRCULANS	82-109								
PRN_BACIN	RIBONUCLEASE PRECURSOR	BACILLUS INTERMEDIUS	38-72								
PRP28_BACTK	RNA POLYMERASE SIGMA-28 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	73-107								
PRP32_CITFR	RNA POLYMERASE SIGMA-32 FACTOR	CITROBACTER FREUNDII	30-57								
PRP35_BACTK	RNA POLYMERASE SIGMA-35 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	8-35	63-90							
PRP54_ALCEU	RNA POLYMERASE SIGMA-54 FACTOR	ALCALIGENES EUTROPHUS	229-266								
PRP54_AZOCA	RNA POLYMERASE SIGMA-54 FACTOR	AZORHIZOBIUM CAULINODANS	174-208								
PRP54_BACSU	RNA POLYMERASE SIGMA-54 FACTOR	BACILLUS SUBTILIS	16-43	97-124	274-308	396-423					
PRP54_BRAJA	RNA POLYMERASE SIGMA-54 FACTOR 1	BRADYRHIZOBIUM JAPONICUM	97-124								
PRP54_KLEPN	RNA POLYMERASE SIGMA-54 FACTOR	KLEBSIELLA PNEUMONIAE	148-182								
PRP54_RHOCA	RNA POLYMERASE SIGMA-54 FACTOR	RHODOBACTER CAPSULATUS	155-185								
PRP55_BRAJA	RNA POLYMERASE SIGMA-54 FACTOR 2	BRADYRHIZOBIUM JAPONICUM	145-172								
PRPSM_ALCEU	PROBABLE SIGMA(54) MODULATION PROTEIN	ALCALIGENES EUTROPHUS	21-51								
PRPSM_ECOLI	PROBABLE SIGMA(54) MODULATION PROTEIN	ESCHERICHIA COLI	21-67								
PRPSM_SALTY	PROBABLE SIGMA(54) MODULATION PROTEIN	SALMONELLA TYPHIMURIUM	21-67								
PRP70_BUCAP	RNA POLYMERASE SIGMA-70 FACTOR	BUCHNERA APHIDICOLA	69-96	109-136	173-217	228-255	303-337				
PRP70_CHLTR	RNA POLYMERASE SIGMA-70 FACTOR	CHLAMYDIA TRACHOMATIS	5-32								
PRP70_ECOLI	RNA POLYMERASE SIGMA-70 FACTOR	ESCHERICHIA COLI	327-361								
PRP70_PSEAE	RNA POLYMERASE SIGMA-70 FACTOR	PSEUDOMONAS AERUGINOSA	334-368								
PRP70_RICPR	RNA POLYMERASE SIGMA-70 FACTOR	RICKETTSIA PROWAZEKII	244-321	348-382							
PRP80_MYXXA	RNA POLYMERASE SIGMA-80 FACTOR	MYXOCOCCUS XANTHUS	208-235	318-347	359-386						
PRPCF_SYNPY	BILIN BIOSYNTHESIS PROTEIN RPCF	SYNECHOCOCCUS SP	180-207								
PRPOA_BACSU	DNA-DIRECTED RNA POLYMERASE ALPHA CHAIN	BACILLUS SUBTILIS	55-107								
PRPOA_ECOLI	A-DIRECTED RNA POLYMERASE ALPHA CHAIN	ESCHERICHIA COLI &	57-105								
		SALMONELLA TYPHIMURIUM									
PRPOA_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	HALOBACTERIUM HALOBIUM	863-904								
PRPOA_HALMO	A-DIRECTED RNA POLYMERASE SUBUNIT A	HALOCOCCUS MORRHUAE	229-270								
PRPOA_METTH	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	METHANOBACTERIUM THERMOAUTOTROPHICU	218-245	486-513	642-669						
PRPOA_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	SULFOLOBUS ACIDOCALDARIUS	222-256	500-527	693-720						
PRPOA_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A'	THERMOCOCCUS CELER	228-262								
PRPOB_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	ESCHERICHIA COLI	599-626	1011-1038							
PRPOB_MYCLE	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	MYCOBACTERIUM LEPRAE	723-760	1084-1111							
PRPOB_SALTY	A-DIRECTED RNA POLYMERASE BETA CHAIN	SALMONELLA TYPHIMURIUM	599-626	958-985	1011-1038						
PRPOB_SULAC	A-DIRECTED RNA POLYMERASE SUBUNIT B	SULFOLOBUS ACIDOCALDARIUS	160-187	255-282	534-561	827-861					
PRPOB_THEMA	A-DIRECTED RNA POLYMERASE BETA CHAIN	THERMOTOGA MARITIMA	350-377								
PRPOC_ANASP	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	ANABAENA SP	152-194								
PRPOC_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA' CHAIN	ESCHERICHIA COLI	786-813	948-994	1223-1257						
PRPOC_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOBACTERIUM HALOBIUM	175-202								
PRPOC_HALMO	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOCOCCUS MORRHUAE	27-54	117-144	207-234						
PRPOC_METTH	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	METHANOBACTERIUM THERMOAUTOTROPHICU	58-85	272-302	327-354						
PRPOC_MYCLE	A-DIRECTED RNA POLYMERASE BETA' CHAIN	MYCOBACTERIUM LEPRAE	273-300	860-887	911-938	1131-1158					
PRPOC_NOSCO	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	NOSTOC COMMUNE	150-192								
PRPOC_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	SULFOLOBUS ACIDOCALDARIUS	36-63	172-214	224-251						
PRPOC_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A'	THERMOCOCCUS CELER	21-58								
PRPOD_NOSCO	DNA-DIRECTED RNA POLYMERASE DELTA CHAIN	NOSTOC COMMUNE	72-116	402-449	539-566						
PRPOE_ECOLI	RNA POLYMERASE SIGMA-E FACTOR	ESCHERICHIA COLI	5-39								
PRPOS_ECOLI	RNA POLYMERASE SIGMA FACTOR KATF	ESCHERICHIA COLI	281-308								
PRPOU_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT B'	HALOBACTERIUM HALOBIUM	91-118								
PRPSA_AGRTU	RNA POLYMERASE SIGMA-A FACTOR	AGROBACTERIUM TUMEFACIENS	310-347	397-427							
PRPSA_ANASP	RNA POLYMERASE SIGMA-A FACTOR	ANABAENA SP	71-105								
PRPSA_CLOAB	RNA POLYMERASE SIGMA-A FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	2-29								
PRPSA_STRAU	RNA POLYMERASE SIGMA FACTOR RPOD	STREPTOMYCES AUREOFACIENS	278-305								

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRPSB_ANASP	RNA POLYMERASE SIGMA-B FACTOR	ANABAENA SP	4-31								
PRPSB_BACSU	RNA POLYMERASE SIGMA-B FACTOR	BACILLUS SUBTILIS	5-35	169-196	200-230						
PRPSB_MYXXA	RNA POLYMERASE SIGMA-B FACTOR	MYXOCOCCUS XANTHUS	47-74								
PRPSB_STIAU	RNA POLYMERASE SIGMA-B FACTOR	STIGMATELLA AURANTIACA	96-123								
PRPSC_ANASP	RNA POLYMERASE SIGMA-C FACTOR	ANABAENA SP	58-85								
PRPSD_BACSU	RNA POLYMERASE SIGMA-D FACTOR	BACILLUS SUBTILIS	192-249								
PRPSE_BAC U	RNA POLYMERASE SIGMA-E FACTOR PRECURSOR	BACILLUS SUBTILIS	63-90								
PRPSE_CLOAB	RNA POLYMERASE SIGMA-E FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	14-41	116-160							
PRPSF_BACLI	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS LICHENIFORMIS	4-31	191-248							
PRPSF_BACME	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS MEGATERIUM	191-225								
PRPSF_BACSU	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS SUBTILIS	4-31	191-248							
PRPSH_BACLI	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS LICHENIFORMIS	191-218								
PRPSH_BACSU	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS SUBTILIS	186-213								
PRPSK_BACSU	RNA POLYMERASE SIGMA-K FACTOR	BACILLUS SUBTILIS	75-109	189-216							
PRPSP_STAAU	RNA POLYMERASE SIGMA FACTOR PLAC	STAPHYLOCOCCUS AUREUS	19-46								
PRPSW_STRCO	RNA POLYMERASE SIGMA FACTOR WHIG	STREPTOMYCES COELICOLOR	232-273								
PRPSX_BACTK	POSSIBLE RNA POLYMERASE SIGMA-G FACTOR	BACILLUS THURINGIENSIS	33-60								
PRS10_ECOLI	30S RIBOSOMAL PROTEIN S10	ESCHERICHIA COLI	3-30								
PRS11_BACSU	30S RIBOSOMAL PROTEIN S11	BACILLUS SUBTILIS	8-42								
PRS13_BACSU	30S RIBOSOMAL PROTEIN S13	BACILLUS SUBTILIS	44-85								
PRS17_METVA	30S RIBOSOMAL PROTEIN S17	METHANOCOCCUS VANNIELII	34-73								
PRS1_ECOLI	30S RIBOSOMAL PROTEIN S1	ESCHERICHIA COLI	99-126	144-171							
PRS1_PROSP	30S RIBOSOMAL PROTEIN S1	PROVIDENCIA SP	39-66	265-292	349-376						
PRS1_RHIME	30S RIBOSOMAL PROTEIN S1	RHIZOBIUM MELILOTI	91-125	172-217							
PRS21_BACST	30S RIBOSOMAL PROTEIN S21	BACILLUS STEAROTHERMOPHILUS	1-28								
PRS2_SPICI	30S RIBOSOMAL PROTEIN S2	SPIROPLASMA CITRI	91-125								
PRS3_ACHLA	30S RIBOSOMAL PROTEIN S3	ACHOLEPLASMA LAIDLAWII	83-110								
PRS3_MYCCA	30S RIBOSOMAL PROTEIN S3	MYCOPLASMA CAPRICOLUM	77-106	136-163							
PRS4_ECOLI	30S RIBOSOMAL PROTEIN S4	ESCHERICHIA COLI	50-77								
PRS5_HALMA	30S RIBOSOMAL PROTEIN S5	HALOARCULA MARISMORTUI	160-187								
PRS5_MYCCA	30S RIBOSOMAL PROTEIN S5	MYCOPLASMA CAPRICOLUM	35-62	182-216							
PRS6_THETH	30S RIBOSOMAL PROTEIN S6	THERMUS AQUATICUS	16-43								
PRS7_METVA	30S RIBOSOMAL PROTEIN S7	METHANOCOCCUS VANNIELII	69-96								
PRS7_MYCLE	30S RIBOSOMAL PROTEIN S7	MYCOBACTERIUM LEPRAE	22-49								
PRS8_MICLU	30S RIBOSOMAL PROTEIN S8	MICROCOCCUS LUTEUS	103-130								
PRS8_MYCCA	30S RIBOSOMAL PROTEIN S8	MYCOPLASMA CAPRICOLUM	41-78								
PRSGA_ECOLI	FERRITIN LIKE PROTEIN	ESCHERICHIA COLI	80-107								
PRT67_ECOLI	RNA-DIRECTED DNA POLYMERASE	ESCHERICHIA COLI	225-268								
PSACB_BACAM	LEVANSUCRASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	175-202	254-281							
PSACB_BACSU	LEVANSUCRASE PRECURSOR	BACILLUS SUBTILIS	175-202	254-288							
PSACB_STRMU	LEVANSUCRASE PRECURSOR	STREPTOCOCCUS MUTANS	31-65	155-189	314-369						
PSACQ_BACLI	SACQ REGULATORY FACTOR	BACILLUS LICHENIFORMIS	2-46								
PSACT_BACSU	SACPA OPERON ANTITERMINATOR	BACILLUS SUBTILIS	102-129	189-216							
PSAGP_STRPY	STREPTOCOCCAL ACID GLYCOPROTEIN	STREPTOCOCCUS PYOGENES	294-331	362-389							
PSAOX_BACSN	SARCOSINE OXIDASE	BACILLUS SP	350-377								
PSAS2_CLOBI	SPORE PROTEIN	CLOSTRIDIUM BIFERMENTANS	17-47								
PSASG_BACCE	SPORE PROTEIN GAMMA-TYPE	BACILLUS CEREUS	31-58								
PSASG_BACST	SPORE PROTEIN GAMMA-TYPE	BACILLUS STEAROTHERMOPHILUS	37-64								
PSBCC_ECOLI	EXONUCLEASE SBCC	ESCHERICHIA COLI	218-260	337-364	535-585	622-656	778-812	821-865	915-942		
PSBCD_ECOLI	EXONUCLEASE SBCD	ESCHERICHIA COLI	137-164	334-397							
PSBM_ECOLI	SBM PROTEIN	ESCHERICHIA COLI	5-32	436-470	553-580						
PSBP_BACSU	SBP PROTEIN	BACILLUS SUBTILIS	28-55								
PSCPA_STRPY	C5A PEPTIDASE PRECURSOR	STREPTOCOCCUS PYOGENES	126-160	784-811	831-880						
PSCRB_KLEPN	SUCROSE-6-PHOSPHATE HYDROLASE	KLEBSIELLA PNEUMONIAE	174-201								
PSCRB_LACLA	SUCROSE-6-PHOSPHATE HYDROLASE	LACTOCOCCUS LACTIS	182-217	354-385	395-422						
PSCRB_STRMU	SUCROSE-6-PHOSPHATE HYDROLASE	STREPTOCOCCUS MUTANS	335-362								
PSCRK_SALTH	FRUCTOKINASE	SALMONELLA THOMPSON	97-124								

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PSCRK_SALTY	FRUCTOKINASE	SALMONELLA TYPHIMURIUM	183-210								
PSCRY_KLEPN	SUCROSE PORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	61-88	240-267							
PSCRY_SALTY	SUCROSE PORIN PRECURSOR	SALMONELLA TYPHIMURIUM	16-54	61-88	240-267						
PSECA_BACSU	PREPROTEIN TRANSLOCASE SECA SUBUNIT	BACILLUS SUBTILIS	12-39	226-260							
PSECA_ECOLI	PREPROTEIN TRANSLOCASE SECA SUBUNIT	ESCHERICHIA COLI	360-387	453-481							
PSECB_ECOLI	PROTEIN-EXPORT PROTEIN SECB	ESCHERICHIA COLI	41-68								
PSECD_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECD	ESCHERICHIA COLI	46-73	378-412							
PSECF_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECF	ESCHERICHIA COLI	174-201								
PSECY_ECOLI	PREPROTEIN TRANSLOCASE SECY SUBUNIT	ESCHERICHIA COLI	101-128								
PSECY_LACLA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	LACTOCOCCUS LACTIS	403-430								
PSECY_METVA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	METHANOCOCCUS VANNIELII	131-161	396-423							
PSECY_STACA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	STAPHYLOCOCCUS CARNOSUS	149-191								
PSEFC_SALEN	SEFC PROTEIN PRECURSOR	SALMONELLA ENTERITIDIS	137-164	475-535							
PSERA_BACSU	D-3-PHOSPHOGLYCERATE DEHYDROGENASE	BACILLUS SUBTILIS	16-43	347-374							
PSFAA_ECOLI	S-FIMBRIAL PROTEIN SUBUNIT PRECURSOR	ESCHERICHIA COLI	11-38								
PSFSA_ECOLI	SUGAR FERMENTATION STIMULATION PROTEIN	ESCHERICHIA COLI	81-115								
PSFUA_SERMA	IRON-TRANSPORT SFUA PROTEIN PRECURSOR	SERRATIA MARCESCENS	34-61								
PSHUI_ECOLI	SHUFFLON PROTEIN A	ESCHERICHIA COLI	224-262								
PSHU2_ECOLI	SHUFFLON PROTEIN A'	ESCHERICHIA COLI	224-262								
PSHU3_ECOLI	SHUFFLON PROTEIN B	ESCHERICHIA COLI	224-262								
PSHU4_ECOLI	SHUFFLON PROTEIN B'	ESCHERICHIA COLI	224-262								
PSHU5_ECOLI	SHUFFLON PROTEIN C	ESCHERICHIA COLI	224-262	402-429							
PSHU6_ECOLI	SHUFFLON PROTEIN C'	ESCHERICHIA COLI	224-262								
PSHU7_ECOLI	SHUFFLON PROTEIN D'	ESCHERICHIA COLI	224-262								
PSINR_BACLI	SINR PROTEIN	BACILLUS LICHENIFORMIS	9-36	43-80							
PSINR_BACSU	SINR PROTEIN	BACILLUS SUBTILIS	9-36	43-70							
PSLAP_ACEKI	CELL SURFACE PROTEIN PRECURSOR	ACETOGENIUM KIVUI	237-264	282-309	313-453	458-489	517-544	563-593	641-685	726-753	
PSLPA_ECOLI	PROPHAGE CP4-57 INTEGRASE	ESCHERICHIA COLI	93-136								
PSMF_ECOLI	SMF PROTEIN	ESCHERICHIA COLI	24-51								
PSMPB_ECOLI	SMALL PROTEIN B	ESCHERICHIA COLI	27-61	90-117							
PSMP_ECOLI	SMP PROTEIN PRECURSOR	ESCHERICHIA COLI	71-98								
PSMTB_SYNP7	TRANSCRIPTIONAL REPRESSOR SMTB	SYNECHOCOCCUS SP	62-96								
PSODF_COXBU	SUPEROXIDE DISMUTASE	COXIELLA BURNETII	116-143								
PSODF_ECOLI	SUPEROXIDE DISMUTASE	ESCHERICHIA COLI	115-142								
PSODF_METTH	SUPEROXIDE DISMUTASE	METHANOBACTERIUM THERMOAUTOTROPHICU	25-52								
PSODF_PHOLE	SUPEROXIDE DISMUTASE	PHOTOBACTERIUM LEIOGNATHI	22-63								
PSODM_PROFR	SUPEROXIDE DISMUTASE	PROPIONIBACTERIUM FREUDENREICHII	164-191								
PSOHB_ECOLI	SOHB PROTEIN PRECURSOR	ESCHERICHIA COLI	7-48	70-97	273-300						
PSOPB_ECOLI	SOPB PROTEIN	ESCHERICHIA COLI	252-279								
PSOXR_ECOLI	SOXR PROTEIN	ESCHERICHIA COLI	16-63								
PSPOJ_BACSU	STAGE 0 SPORULATION PROTEIN J	BACILLUS SUBTILIS	131-158								
PSP2A_BACME	STAGE II SPORULATION PROTEIN AA	BACILLUS MEGATERIUM	19-53								
PSP2A_BACSU	STAGE II SPORULATION PROTEIN AA	BACILLUS SUBTILIS	21-55								
PSP2B_BACLI	STAGE II SPORULATION PROTEIN AB	BACILLUS LICHENIFORMIS	42-69								
PSP2B_BACME	STAGE II SPORULATION PROTEIN AB	BACILLUS MEGATERIUM	36-73								
PSP2D_BACSU	STAGE II SPORULATION PROTEIN D	BACILLUS SUBTILIS	134-161								
PSP2G_BACTK	POSSIBLE ASPARTYL PROTEASE	BACILLUS THURINGIENSIS	4-36	117-144							
PSP2J_BACSU	STAGE II SPORULATION PROTEIN J	BACILLUS SUBTILIS	14-44	463-500							
PSP3D_BACSU	STAGE III SPORULATION PROTEIN D	BACILLUS SUBTILIS	9-36	52-86							
PSP3J_BACSU	STAGE III SPORULATION PROTEIN J PRECURSOR	BACILLUS SUBTILIS	44-75								
PSP4A_BACSU	STAGE IV SPORULATION PROTEIN A	BACILLUS SUBTILIS	139-180								
PSP4B_BACSU	STAGE IV SPORULATION PROTEIN B	BACILLUS SUBTILIS	39-66								
PSP4G_BACSU	STAGE IV SPORULATION PROTEIN FB	BACILLUS SUBTILIS	251-278								
PSP5A_BACSU	STAGE V SPORULATION PROTEIN AF	BACILLUS SUBTILIS	9-36								
PSPAA_STRDO	ANTIGEN I	STREPTOCOCCUS DOWNEI	184-218								
PSPAB_BACSU	SUBTILIN BIOSYNTHESIS 117 KD PROTEIN	BACILLUS SUBTILIS	181-208								
PSPAC_BACSU	SUBTILIN BIOSYNTHESIS PROTEIN SPAC	BACILLUS SUBTILIS	311-338								

PCGENE	107a178a4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PSPAK_BACSU	SENSOR PROTEIN SPAK	BACILLUS SUBTILIS	80-107	224-251	290-324						
PSPAP_STRMU	CELL SURFACE ANTIGEN I/II PRECURSOR	STREPTOCOCCUS MUTANS	122-276	281-465	538-565	576-630	1071-1098	1135-1182	1377-1430		
PSPAR_BACSU	REGULATORY PROTEIN	BACILLUS SUBTILIS	4-31	172-199							
PSPAT_BACSU	SUBTILIN TRANSPORT PROTEIN SPAT	BACILLUS SUBTILIS	55-82	226-267							
PSPEC_STRPY	EXOTOXIN TYPE C PRECURSOR	STREPTOCOCCUS PYOGENES	12-39								
PSPIR_SPICI	SPIRALIN	SPIROPLASMA CITRI	82-109	155-182							
PSPIR_SPIME	SPIRALIN	SPIROPLASMA MELLIFERUM	195-222								
PSPOT_ECOLI	GUAN-3',5'-BIS(DIPHOS) 3'-PYROPHOSPHOHYDROLA	ESCHERICHIA COLI	637-664								
PSPPA_ECOLI	PROTEASE IV	ESCHERICHIA COLI	278-305								
PSQHC_ZYMMO	SQUALENE-HOPENE CYCLASE	ZYMOMONAS MOBILIS	590-617								
PSRFA_BACSU	SURFACTIN SYNTHETASE SUBUNIT A	BACILLUS SUBTILIS	159-186	244-271							
PSRP5_ECOLI	SIGNAL RECOGNITION PARTICLE PROTEIN	ESCHERICHIA COLI	301-328								
PSRP5_MYCMY	SIGNAL RECOGNITION PARTICLE PROTEIN	MYCOPLASMA MYCOIDES	21-65	107-141	394-428						
PSSA1_PASHA	SEROTYPE-SPECIFIC ANTIGEN 1 PRECURSOR	PASTEURELLA HAEMOLYTICA	151-178	358-385	465-518	529-570	860-904				
PSSAB_STRPA	ADHESIN B PRECURSOR	STREPTOCOCCUS PARASANGUIS	32-59								
PSSAB_STRSA	ADHESIN B PRECURSOR	STREPTOCOCCUS SANGUIS	21-59	101-128							
PSSB_ECOLI	SINGLE-STRAND BINDING PROTEIN	ESCHERICHIA COLI	68-95								
PSSB_PROMI	SINGLE-STRAND BINDING PROTEIN	PROTEUS MIRABILIS	63-104								
PSSB_SERMA	SINGLE-STRAND BINDING PROTEIN	SERRATIA MARCESCENS	63-104								
PSSP5_STRSA	AGGLUTININ RECEPTOR PRECURSOR	STREPTOCOCCUS SANGUIS	131-173	178-287	295-483	565-592	676-710	1081-1131			
PSTAV_STRAV	STREPTAVIDIN PRECURSOR	STREPTOMYCES AVIDINII	125-152								
PSTA_ECOLI	STREPTOTHRICIN ACETYLTRANSFERASE	ESCHERICHIA COLI	66-93								
PSTC1_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-119	172-199	280-311						
PSTC2_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-117	264-291							
PSTC_CLOBE	L-TRANSD TRANSC CONTROL PROTEIN	CLOSTRIDIUM BEIJERINCKII	47-74								
PSTPA_ECOLI	STPA PROTEIN	ESCHERICHIA COLI	36-63								
PSTRI_STRGR	INOSAMINE-PHOSPHATE AMIDINOTRANSFERASE I	STREPTOMYCES GRISEUS	183-210								
PSTRP_STREQ	STREPTOKINASE C PRECURSOR	STREPTOCOCCUS EQUISIMILIS	209-236	281-308							
PSTRP_STRPY	STREPTOKINASE A PRECURSOR	STREPTOCOCCUS PYOGENES	209-236								
PSTRP_STRSP	STREPTOKINASE G PRECURSOR	STREPTOCOCCUS SP	209-236	281-308							
PSUBE_BACSU	MINOR EXTRACELLULAR PROTEASE EPR PREC	BACILLUS SUBTILIS	435-462	522-563	605-639						
PSUBF_BACSU	BACILLOPEPTIDASE F PRECURSOR	BACILLUS SUBTILIS	40-67	89-116	121-148	554-597					
PSUBI_SALTY	SULFATE-BINDING PROTEIN	SALMONELLA TYPHIMURIUM	37-74								
PSUBI_SYNP7	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCOCCUS SP	63-94								
PSUBI_SYNY3	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCYSTIS SP	64-91								
PSUBT_BACLI	SUBTILISIN CARLSBERG PRECURSOR	BACILLUS LICHENIFORMIS	191-222								
PSUBT_BACMS	SUBTILISIN	BACILLUS MESENTERICUS	91-118								
PSUBT_BACS9	SUBTILISIN PRECURSOR	BACILLUS SP	36-63	250-277							
PSUBT_BACSA	SUBTILISIN AMYLOSACCHARITICUS PRECURSOR	BACILLUS SUBTILIS	197-224								
PSUBT_BACSD	SUBTILISIN	BACILLUS SUBTILIS	86-117								
PSUBT_BACST	SUBTILISIN J PRECURSOR	BACILLUS STEAROTHERMOPHILUS	197-224								
PSUBT_BACSU	SUBTILISIN E PRECURSOR	BACILLUS SUBTILIS	197-224								
PSUBV_BACSU	MINOR EXTRACELLULAR PROTEASE VPR PRECUR	BACILLUS SUBTILIS	55-108	613-654	741-768						
PSUCC_ECOLI	SUCCINYL-COA SYNTHETASE BETA	ESCHERICHIA COLI	62-89								
PSUCP_AGRVI	SUCROSE PHOSPHORYLASE	AGROBACTERIUM VITIS	449-476								
PSULA_ENTAE	CELL DIVISION INHIBITOR	ENTEROBACTER AEROGENES	112-139								
PSYA_ECOLI	ALANYL-TRNA SYNTHETASE	ESCHERICHIA COLI	257-287	725-752	790-821						
PSYD_ECOLI	ASPARTYL-TRNA SYNTHETASE	ESCHERICHIA COLI	330-357								
PSYE_BACST	GLUTAMYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	49-76								
PSYE_BACSU	GLUTAMYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	49-76	351-386							
PSYE_THETH	GLUTAMYL-TRNA SYNTHETASE	THERMUS AQUATICUS	405-432								
PSYFA_BACSU	PHENYLALANYL-TRNA SYNTHETASE A CHAIN	BACILLUS SUBTILIS	7-34								
PSYFB_BACSU	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	BACILLUS SUBTILIS	340-367	407-441							
PSYFB_ECOLI	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	546-573	607-634	744-771						
PSYGB_ECOLI	GLYCYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	354-381	487-514							
PSYH_STREQ	HISTIDYL-TRNA SYNTHETASE	STREPTOCOCCUS EQUISIMILIS	376-403								
PSYI_METTH	ISOLEUCYL-TRNA SYNTHETASE	METHANOBACTERIUM THERMOAUTOTROPHICU	1010-1037								

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PSYK1_ECOLI	LYSYL-TRNA SYNTHETASE	ESCHERICHIA COLI	283-310								
PSYK2_ECOLI	LYSYL-TRNA SYNTHETASE, HEAT INDUCIBLE	ESCHERICHIA COLI	45-72	283-310							
PSYL_ECOLI	LEUCYL-TRNA SYNTHETASE	ESCHERICHIA COLI	220-247								
PSYM_BACST	METHIONYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	69-99								
PSYM_ECOLI	METHIONYL-TRNA SYNTHETASE	ESCHERICHIA COLI	87-124								
PSYP_ECOLI	PROLYL-TRNA SYNTHETASE	ESCHERICHIA COLI	541-568								
PSYQ_ECOLI	GLUTAMINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	394-421								
PSYRD_PSESY	SYRD PROTEIN	PSEUDOMONAS SYRINGAE	449-483								
PSYR_ECOLI	ARGINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	540-574								
PSYT1_BACSU	THREONYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	401-428	605-639							
PSYV_BACST	VALYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	603-630	809-843							
PSYV_ECOLI	VALYL-TRNA SYNTHETASE	ESCHERICHIA COLI	300-327	882-912	924-951						
PSYW_BACST	TRYPTOPHANYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	204-231	239-266							
PSYY1_BACSU	TYROSYL-TRNA SYNTHETASE 1	BACILLUS SUBTILIS	81-115	375-409							
PSYY2_BACSU	TYROSYL-TRNA SYNTHETASE 2	BACILLUS SUBTILIS	69-96								
PSYY_BACCA	TYROSYL-TRNA SYNTHETASE	BACILLUS CALDOTENAX	295-322	372-416							
PSYY_BACST	TYROSYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	295-322	372-416							
PT1M1_ECOLI	ENZYME ECOR124/3 I M PROTEIN	ESCHERICHIA COLI	126-167	405-432	485-512						
PT1R1_ECOLI	ENZYME ECOR124/3 I R PROTEIN	ESCHERICHIA COLI	30-57	624-651	702-736	768-795	843-870	966-1000			
PT1R_ECOLI	ENZYME ECOK I R PROTEIN	ESCHERICHIA COLI	158-263								
PT1S1_ECOLI	ENZYME ECOR124/3 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	154-181								
PT1SA_ECOLI	ENZYME ECOA I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
PT1SB_ECOLI	ENZYME ECOB I SPECIFICITY PROTEIN	ESCHERICHIA COLI	278-312								
PT1SD_ECOLI	ENZYME ECOD I SPECIFICITY PROTEIN	ESCHERICHIA COLI	249-283								
PT1SE_ECOLI	ENZYME ECOE I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
PT1S_SALPO	ENZYME SPECIFICITY PROTEIN	SALMONELLA POTSDAM	396-423								
PT1S_SALTY	ENZYME SPECIFICITY PROTEIN	SALMONELLA TYPHIMURIUM	194-221	276-304	402-429						
PT237_ECOLI	TYPE IIS RESTRICTION ENZYME ECO57I	ESCHERICHIA COLI	138-196	265-295	406-440	639-682	687-728	926-954			
PT2A1_ACICA	TYPE II RESTRICTION ENZYME ACCI	ACINETOBACTER CALCOACETICUS	49-76								
PT2BF_BACSU	TYPE II RESTRICTION ENZYME BSUFI	BACILLUS SUBTILIS	3-43	135-223	236-280						
PT2BR_BACSU	TYPE II RESTRICTION ENZYME BSURI	BACILLUS SUBTILIS	3-45	338-384	401-430	532-559					
PT2C1_CITFR	TYPE II RESTRICTION ENZYME CFRBI	CITROBACTER FREUNDII	35-62								
PT2C1_HERAU	TYPE II RESTRICTION ENZYME HGICI	HERPETOSIPHON AURANTIACUS	176-215								
PT2C2_HERAU	TYPE II RESTRICTION ENZYME HGICII	HERPETOSIPHON AURANTIACUS	243-273								
PT2D1_DESDN	TYPE II RESTRICTION ENZYME DDEI	DESULFOVIBRIO DESULFURICANS	85-122								
PT2D1_STRPN	TYPE II RESTRICTION ENZYME DPNI	STREPTOCOCCUS PNEUMONIAE	213-240								
PT2E1_ECOLI	TYPE II RESTRICTION ENZYME ECORI	ESCHERICHIA COLI	2-29								
PT2E2_ECOLI	TYPE II RESTRICTION ENZYME ECORII	ESCHERICHIA COLI	333-360								
PT2E5_ECOLI	TYPE II RESTRICTION ENZYME ECORV	ESCHERICHIA COLI	128-155	214-241							
PT2F1_FLAOK	TYPE IIS RESTRICTION ENZYME FOKI	FLAVOBACTERIUM OKEANOKOITES	302-336								
PT2H1_HAEIN	TYPE II RESTRICTION ENZYME HINFI	HAEMOPHILUS INFLUENZAE	6-38	69-96							
PT2H1_HAEPA	TYPE II RESTRICTION ENZYME HPAI	HAEMOPHILUS PARAINFLUENZAE	77-125								
PT2H2_HAEHA	TYPE II RESTRICTION ENZYME HHAII	HAEMOPHILUS HAEMOLYTICUS	23-50								
PT2H2_HAEIN	TYPE II RESTRICTION ENZYME HINCII	HAEMOPHILUS INFLUENZAE	97-138								
PT2K1_KLEPN	TYPE II RESTRICTION ENZYME KPNI	KLEBSIELLA PNEUMONIAE	18-45	178-205							
PT2M1_MORBO	TYPE II RESTRICTION ENZYME MBOI	MORAXELLA BOVIS	15-61	187-215	225-252						
PT2M2_MORBO	TYPE IIS RESTRICTION ENZYME MBOII	MORAXELLA BOVIS	3-30	158-185	337-364						
PT2MZ_METTF	POSSIBLE TYPE II RESTRICTION ENZYME MTHZI	METHANOBACTERIUM THERMOFORMICICUM	105-151								
PT2NG_NEIGO	TYPE II RESTRICTION ENZYME NGOPII	NEISSERIA GONORRHOEAE	117-144	231-258							
PT2S1_STRSA	TYPE II RESTRICTION ENZYME STSI	STREPTOCOCCUS SANGUIS	5-32	41-68	395-446						
PT2S2_SHISO	TYPE II RESTRICTION ENZYME SSOII	SHIGELLA SONNEI	206-243	258-288							
PT2S3_STAAU	TYPE II RESTRICTION ENZYME SAUJAI	STAPHYLOCOCCUS AUREUS	70-102								
PT2S1_SALIN	TYPE II RESTRICTION ENZYME SINI	SALMONELLA INFANTIS	144-181								
PT2SM_SERMA	TYPE II RESTRICTION ENZYME SMAI	SERRATIA MARCESCENS	61-88								
PT2TA_THEAQ	TYPE II RESTRICTION ENZYME TAQI	THERMUS AQUATICUS	147-181	203-237							
PT3MO_ECOLI	SYSTEM ECOP15 ENZYME MOD	ESCHERICHIA COLI	37-71	75-102	236-296	378-405					
PT3RE_BACCE	SYSTEM ENZYME RES	BACILLUS CEREUS	62-89	256-283							

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTA47_TREPA	47 KD MEMBRANE ANTIGEN PRECURSOR	TREPONEMA PALLIDUM	26-53								
PTA53_TREDE	53 KD MEMBRANE ANTIGEN A PRECURSOR	TREPONEMA DENTICOLA	99-126	298-329							
PTACY_BACAL	ALVEOLYSIN PRECURSOR	BACILLUS ALVEI	272-302	374-401							
PTACY_CLOPE	PERFRINGOLYSIN O PRECURSOR	CLOSTRIDIUM PERFRINGENS	270-311	372-434							
PTACY_LISIV	IVANOLYSIN PRECURSOR	LISTERIA IVANOVII	93-120	167-195	396-423						
PTACY_LISMO	LISTERIOLYSIN O PRECURSOR	LISTERIA MONOCYTOGENES	98-125	168-196	295-329	397-424					
PTACY_LISSE	SEELIGERIOLYSIN PRECURSOR	LISTERIA SEELIGERI	99-126	296-323	349-376	398-463					
PTACY_STRPN	PNEUMOLYSIN	STREPTOCOCCUS PNEUMONIAE	234-272								
PTACY_STRPY	STREPTOLYSIN O PRECURSOR	STREPTOCOCCUS PYOGENES	86-133	355-382	440-470						
PTAGB_BACSU	TECHOIC ACID BIOSYN PROTEIN B PREC	BACILLUS SUBTILIS	42-69								
PTAGC_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN C	BACILLUS SUBTILIS	348-375								
PTAGE_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN E	BACILLUS SUBTILIS	59-93	144-181	185-243	565-592	600-627				
PTAGF_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN F	BACILLUS SUBTILIS	182-209								
PTBPI_NEIGO	TRANSFERRIN-BINDING PROTEIN 1 PRECURSOR	NEISSERIA GONORRHOEAE	39-73	137-164	398-425	810-841					
PTBUD_PSEPI	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS PICKETTII	38-65	227-254	375-402						
PTCDT_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN TCDT	SALMONELLA TYPHIMURIUM	105-132								
PTCPC_VIBCH	MEMBRANE PROTEIN TCPC PRECURSOR	VIBRIO CHOLERAE	20-47	83-128	199-233	263-290	344-375	459-486			
PTCPE_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPE	VIBRIO CHOLERAE	24-59	77-111							
PTCPF_VIBCH	TCP PILUS SECRETION PROTEIN TCPF	VIBRIO CHOLERAE	32-66	211-238							
PTCPH_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPH	VIBRIO CHOLERAE	95-122								
PTCPI_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPI	VIBRIO CHOLERAE	25-52	234-261	279-306	346-379					
PTCPN_VIBCH	TCP PILUS VIRULENCE REGULATORY PROTEIN	VIBRIO CHOLERAE	48-75								
PTCPO_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPO	VIBRIO CHOLERAE	230-257								
PTCPY_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPY	VIBRIO CHOLERAE	121-148								
PTCPZ_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPZ	VIBRIO CHOLERAE	44-85								
PTCR2_BACSU	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS SUBTILIS	404-434								
PTCR_BACST	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS STEAROTHERMOPHILUS	422-453								
PTCR_STAAU	TETRACYCLINE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	404-431								
PTCR_STRAG	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS AGALACTIAE	422-453								
PTCR_STRPN	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS PNEUMONIAE	422-453								
PTDCA_ECOLI	TDCABC OPERON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	210-239								
PTDCC_ECOLI	TDCC PROTEIN	ESCHERICHIA COLI	334-361								
PTEE6_STRPY	TRYPSIN-RESIST SURFACE T6 PROTEIN PREC	STREPTOCOCCUS PYOGENES	137-164	361-395	400-437						
PTER3_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS B	ESCHERICHIA COLI	8-36								
PTER4_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS D	ESCHERICHIA COLI	183-210								
PTERA_ALCSP	TELLURIUM RESISTANCE PROTEIN TERA	ALCALIGENES SP	48-86								
PTESB_ECOLI	ACYL-COA THIOESTERASE II	ESCHERICHIA COLI	4-31								
PTET3_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TETM	ENTEROCOCCUS FAECALIS	2-36	130-159	179-206	217-244					
PTET9_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TETM	ENTEROCOCCUS FAECALIS	2-36	130-159	217-244	260-287					
PTETC_ECOLI	TRANSPOSON TN10 TETC PROTEIN	ESCHERICHIA COLI	72-106	116-158							
PTETM_STRLI	TETRACYCLINE RESISTANCE PROTEIN	STREPTOMYCES LIVIDANS	82-109								
PTETM_UREUR	TETRACYCLINE RESISTANCE PROTEIN TETM	UREAPLASMA UREALYTICUM	2-36	130-159	217-244	260-287					
PTETO_CAMCO	TETRACYCLINE RESISTANCE PROTEIN TETO	CAMPYLOBACTER COLI	2-29								
PTETO_CAMJE	TETRACYCLINE RESISTANCE PROTEIN TETO	CAMPYLOBACTER JEJUNI	2-36								
PTETO_STRMU	TETRACYCLINE RESISTANCE PROTEIN TETO	STREPTOCOCCUS MUTANS	2-29								
PTETX_BACFR	TETRACYCLINE RESISTANCE PROTEIN	BACTEROIDES FRAGILIS	35-62								
PTETX_CLOTE	TETANUS TOXIN PRECURSOR	CLOSTRIDIUM TETANI	274-304	540-567	615-642	692-719	985-1012	1240-1277			
PTF2B_PYRWO	TRANS INITIATION FACTOR IIB HOMOLOG	PYROCOCCUS WOESEI	218-258								
PTFDC_ALCEU	CHLOROCATECHOL 1,2-DIOXYGENASE	ALCALIGENES EUTROPHUS	2-33								
PTGT_ECOLI	QUEUINE TRNA-RIBOSYLTRANSFERASE	ESCHERICHIA COLI	173-200								
PTHDI_LACLA	THREONINE DEHYDRATASE BIOSYNTHETIC	LACTOCOCCUS LACTIS	287-303								
PTHDI_ECOLI	THREONINE DEHYDRATASE CATABOLIC	ESCHERICHIA COLI	293-320								
PTHDF_BACSU	FURAN OXIDATION PROTEIN THDF	BACILLUS SUBTILIS	153-180	192-226	282-316	391-418					
PTHDF_ECOLI	FURAN OXIDATION PROTEIN THDF	ESCHERICHIA COLI	226-260	404-431							
PTHDF_PSEPU	FURAN OXIDATION PROTEIN THDF	PSEUDOMONAS PUTIDA	226-260								
PTHER_BACCE	THERMOLYSIN	BACILLUS CEREUS	4-38	240-267							
PTHER_BACST	THERMOLYSIN PRECURSOR	BACILLUS STEAROTHERMOPHILUS	45-72								

PCGENE	107:178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTHER_BACTH	THERMOLYSIN	BACILLUS THERMOPROTEOLYTICUS	86-113								
PTHET_THEVU	THERMITASE	THERMOACTINOMYCES VULGARIS	131-161								
PTHIC_ECOLI	THIC PROTEIN	ESCHERICHIA COLI	232-263	301-328							
PTHIG_ECOLI	THIG PROTEIN	ESCHERICHIA COLI	138-165								
PTHPS_SULAC	THERMOPSIN PRECURSOR	SULFOLOBUS ACIDOCALDARIUS	135-172	199-233							
PTHRC_BRELA	THREONINE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	288-315								
PTHTR_SACER	PUTATIVE THIOSULFATE SULFURTRANSFERASE	SACCHAROPOLYSPORA ERYTHRAEA	69-96								
PTIG_ECOLI	TRIGGER FACTOR	ESCHERICHIA COLI	144-171								
PTMPA_TREPA	TREPONEMAL MEMBRANE PROTEIN A PRECURSOR	TREPONEMA PALLIDUM	236-266								
PTMPB_TREPA	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PALLIDUM	44-71								
PTMPB_TREPH	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PHAGEDENIS	41-68								
PTNAB_ECOLI	LOW AFFINITY TRYPTOPHAN PERMEASE	ESCHERICHIA COLI	74-108								
PTNP4_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	52-79	322-349							
PTNP7_ENTFA	TRANSPOSON TN917 RESOLVASE	ENTEROCOCCUS FAECALIS	59-97	111-138							
PTNPA_STAAU	TRANSPOSASE A	STAPHYLOCOCCUS AUREUS	151-178								
PTNPB_STAAU	TRANSPOSASE B	STAPHYLOCOCCUS AUREUS	589-625								
PTNPI_BACTU	TNPI RESOLVASE	BACILLUS THURINGIENSIS	7-62	65-92	174-201						
PTNSB_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSB	ESCHERICHIA COLI	99-126	510-537							
PTNSC_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSC	ESCHERICHIA COLI	32-59	314-341							
PTNSD_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSD	ESCHERICHIA COLI	339-366								
PTNSE_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSE	ESCHERICHIA COLI	463-490								
PTOD1_PSEPU	TOLUENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PTOD2_PSEPU	TOLUENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PTODA_PSEPU	TOLUENE 1,2-DIOXYGENASE SYSTEM	PSEUDOMONAS PUTIDA	179-213								
PTODJ_PSEPU	TODF PRODUCT HYDRATASE	PSEUDOMONAS PUTIDA	143-170								
PTOLA_ECOLI	TOLA PROTEIN	ESCHERICHIA COLI	101-138								
PTOLC_ECOLI	OUTER MEMBRANE PROTEIN TOLC PRECURSOR	ESCHERICHIA COLI	144-178	184-211	239-266	348-375	383-443				
PTOPI_SYNP7	DNA TOPOISOMERASE I	SYNECHOCOCCUS SP	203-230								
PTORA_ECOLI	TRIMETHYLAMINE-N-OXIDE REDUCTASE	ESCHERICHIA COLI	797-824								
PTOX1_BORPE	PERTUSSIS TOXIN SUBUNIT 1 (S1) PRECURSOR	BORDETELLA PERTUSSIS	179-206								
PTOX2_BORPE	PERTUSSIS TOXIN SUBUNIT 2 (S2) PRECURSOR	BORDETELLA PERTUSSIS	58-85								
PTOXA_CLODI	TOXIN A	CLOSTRIDIUM DIFFICILE	20-88	99-159	204-231	342-369	373-414	847-962	966-994	997-1024	1348-1402
PTOXA_PSEAE	EXOTOXIN A PRECURSOR	PSEUDOMONAS AERUGINOSA	470-497								
PTOXB_CLODI	TOXIN B	CLOSTRIDIUM DIFFICILE	38-72	133-163	199-241	825-869	923-950	1334-1388	1403-1433	1506-1565	1716-1747
PTOXS_VIBCH	TRANSMEMBRANE REGULATORY PROTEIN TOXS	VIBRIO CHOLERAE	13-40								
PTPF1_TREPA	ANTIGEN TPF1	TREPONEMA PALLIDUM	106-143								
PTPIS_ECOLI	TRIOSEPHOSPHATE ISOMERASE	ESCHERICHIA COLI	83-110								
PTPIS_MORSP	TRIOSEPHOSPHATE ISOMERASE	MORAXELLA SP	139-166								
PTPR_PORGI	THIOL PROTEASE PRECURSOR	PORPHYROMONAS GINGIVALIS	117-144								
PTR1M_AGRT3	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTR1M_AGRT4	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTR1M_PSESS	TRYPTOPHAN 2-MONOOXYGENASE	PSEUDOMONAS SYRINGAE	41-68								
PTRA1_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	58-113								
PTRA2_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	11-38	58-113							
PTRA3_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	721-755								
PTRA3_RHIME	TRANSPOSASE	RHIZOBIUM MELILOTI	179-206								
PTRA3_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	33-60	68-95							
PTRA4_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	181-208	308-340	720-754						
PTRA6_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	51-78								
PTRA6_SHISO	TRANSPOSASE	SHIGELLA SONNEI	51-78	200-227	231-258						
PTRA7_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	729-756								
PTRA9_MYCTU	PUTATIVE TRANSPOSASE	MYCOBACTERIUM TUBERCULOSIS	159-186								
PTRAB_BACTB	IS231B PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_BACTB	IS231C PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	4-31	45-72							
PTRAX_BACTB	IS231 PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRA_BACTU	TRANSPOSASE	BACILLUS THURINGIENSIS	93-127	509-539							

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PCGENE	107:178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTRA_PSEAE	TRANSPOSASE	PSEUDOMONAS AERUGINOSA	127-154	721-755							
PTRBI_ECOLI	TRAB PROTEIN	ESCHERICHIA COLI	113-143								
PTRBF_ECOLI	TRBF PROTEIN	ESCHERICHIA COLI	12-39								
PTRBI_ECOLI	TRBI PROTEIN	ESCHERICHIA COLI	70-97								
PTRC1_ECOLI	TRAC-1 PROTEIN	ESCHERICHIA COLI	1006-1058								
PTRC2_ECOLI	TRAC-2 PROTEIN	ESCHERICHIA COLI	1102-1149								
PTRCJ_ECOLI	TRAC-J PROTEIN	ESCHERICHIA COLI	884-931								
PTRDI_ECOLI	TRAD PROTEIN	ESCHERICHIA COLI	297-348								
PTREA_ECOLI	PERIPLASMIC TREHALASE PRECURSOR	ESCHERICHIA COLI	362-403	477-508							
PTREC_ECOLI	AMYLOTREHALASE	ESCHERICHIA COLI	280-307								
PTRFA_ECOLI	TRFA TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	5-32	105-132							
PTRGI_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	61-88	630-657	831-858	865-895					
PTRGS_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	196-223								
PTRG6_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	195-222	518-545							
PTRI1_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	155-209	597-624	887-914	1350-1377					
PTRI2_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	155-209	597-624	887-914	1350-1377					
PTRI5_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	47-74	328-371							
PTRJ4_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI	36-63								
PTRM8_ECOLI	TRAM PROTEIN	ESCHERICHIA COLI	5-32								
PTRMA_ECOLI	TRNA (URACIL-5-)-METHYLTRANSFERASE	ESCHERICHIA COLI	107-137								
PTRMD_ECOLI	TRNA (GUANINE-N1)-METHYLTRANSFERASE	ESCHERICHIA COLI	115-142	226-253							
PTRPA_BACSU	TRYPTOPHAN SYNTHASE ALPHA CHAIN	BACILLUS SUBTILIS	220-247								
PTRPA_CAUCR	TRYPTOPHAN SYNTHASE ALPHA CHAIN	CAULOBACTER CRESCENTUS	241-275								
PTRPA_PSEAE	TRYPTOPHAN SYNTHASE ALPHA CHAIN	PSEUDOMONAS AERUGINOSA	176-203								
PTRPD_ACICA	TRYPTOPHAN SYNTHASE BETA CHAIN	ACINETOBACTER CALCOACETICUS	79-113								
PTRPB_BACSU	TRYPTOPHAN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	76-103	318-345							
PTRPB_BRELA	TRYPTOPHAN SYNTHASE BETA CHAIN	BREVIBACTERIUM LACTOFERMENTUM	172-199								
PTRPB_LACCA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOBACILLUS CASEI	83-117								
PTRPB_LACLA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOCOCCUS LACTIS	77-104	164-191							
PTRPD_VIBPA	TRYPTOPHAN SYNTHASE BETA CHAIN	VIBRIO PARAHAEMOLYTICUS	56-83								
PTRPC_BRELA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	229-256								
PTRPC_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	ESCHERICHIA COLI	205-232								
PTRPC_LACLA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	LACTOCOCCUS LACTIS	148-175								
PTRPC_VIBPA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	VIBRIO PARAHAEMOLYTICUS	346-376								
PTRPD_ACICA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	ACINETOBACTER CALCOACETICUS	223-250	260-294							
PTRPD_PSEAE	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	205-232								
PTRPD_PSEPU	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS PUTIDA	205-232								
PTRPD_VIBPA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	VIBRIO PARAHAEMOLYTICUS	2-29								
PTRPE_BACPU	ANTHRANILATE SYNTHASE COMPONENT I	BACILLUS PUMILUS	33-60								
PTRPE_CLOTM	ANTHRANILATE SYNTHASE COMPONENT I	CLOSTRIDIUM THERMOCELLUM	165-226								
PTRPE_LACLA	ANTHRANILATE SYNTHASE COMPONENT I	LACTOCOCCUS LACTIS	142-191								
PTRPE_LEPBI	ANTHRANILATE SYNTHASE COMPONENT I	LEPTOSPIRA BIFLEXA	145-179								
PTRPE_RHIME	ANTHRANILATE SYNTHASE	RHIZOBIUM MELILOTI	139-166								
PTRPE_SALTY	ANTHRANILATE SYNTHASE COMPONENT I	SALMONELLA TYPHIMURIUM	191-218								
PTRPE_SULSO	ANTHRANILATE SYNTHASE COMPONENT I	SULFOLOBUS SOLFATARICUS	143-183	298-328							
PTRPE_VIBPA	ANTHRANILATE SYNTHASE COMPONENT I	VIBRIO PARAHAEMOLYTICUS	9-36	54-81							
PTRPG_ACICA	ANTHRANILATE SYNTHASE COMPONENT II	ACINETOBACTER CALCOACETICUS	12-39								
PTRPG_AZOBR	ANTHRANILATE SYNTHASE COMPONENT II	AZOSPIRILLUM BRASILENSE	4-31								
PTRPG_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	ESCHERICHIA COLI	5-32								
PTRPG_LACLA	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS	4-31								
PTRPG_PSEAE	ANTHRANILATE SYNTHASE COMPONENT II	PSEUDOMONAS AERUGINOSA	12-39								
PTRPG_SALTY	ANTHRANILATE SYNTHASE COMPONENT II	SALMONELLA TYPHIMURIUM	5-32								
PTRPG_SERMA	ANTHRANILATE SYNTHASE COMPONENT II	SERRATIA MARCESCENS	9-43								
PTRPG_SHIDY	ANTHRANILATE SYNTHASE COMPONENT II	SHIGELLA DYSENTERIAE	5-32								
PTRPO_PSEAE	PUTATIVE TRANSCRIPTIONAL REGULATOR	PSEUDOMONAS AERUGINOSA	147-174								
PTRS1_ECOLI	TRAS PROTEIN	ESCHERICHIA COLI	85-119								
PTRT1_ECOLI	RESISTANCE PROTEIN PRECURSOR	ESCHERICHIA COLI	184-221								

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTRY1_SALTY	TRAY PROTEIN	SALMONELLA TYPHIMURIUM	30-57								
PTRYP_STRGR	TRYPSIN PRECURSOR	STREPTOMYCES GRISEUS	80-107								
PTSR_STRAZ	RRNA METHYLTRANSFERASE	STREPTOMYCES AZUREUS	126-153								
PTSST_STAAU	TOXIC SHOCK SYNDROME TOXIN-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	29-63	102-129							
PTSX_ECOLI	CHANNEL-FORMING PROTEIN TSX PRECURSOR	ESCHERICHIA COLI	225-252								
PTTK_ECOLI	HYPOTHETICAL 24 3 KD PROTEIN	ESCHERICHIA COLI	81-115								
PTUS_ECOLI	SITE-BINDING PROTEIN	ESCHERICHIA COLI	57-91	107-134							
PTYCA_BACBR	TYROCIDINE SYNTHETASE I	BACILLUS BREVIS	117-147	534-561	1019-1051						
PTYF1_TREPE	ANTIGEN TYF1	TREPONEMA PERTENUE	106-143								
PTYRA_BACSU	POSSIBLE PREPHENATE DEHYDROGENASE	BACILLUS SUBTILIS	244-271	312-342							
PTYRA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	329-370								
PTYRR_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN TYRR	ESCHERICHIA COLI	483-510								
PTYSY_LACCA	THYMIDYLATE SYNTHASE	LACTOBACILLUS CASEI	139-173								
PTYSY_LACLA	THYMIDYLATE SYNTHASE	LACTOCOCCUS LACTIS	75-109								
PTYSY_STAAU	THYMIDYLATE SYNTHASE	STAPHYLOCOCCUS AUREUS	69-96								
PUHPB_ECOLI	SENSOR PROTEIN UHPB	ESCHERICHIA COLI	276-303	316-343							
PUHPB_SALTY	SENSOR PROTEIN UHPB	SALMONELLA TYPHIMURIUM	276-303	316-343							
PUMUC_SALTY	UMUC PROTEIN	SALMONELLA TYPHIMURIUM	204-231								
PUPP_ECOLI	URACIL PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	30-57								
PURAA_ECOLI	URACIL PERMEASE	ESCHERICHIA COLI	350-384								
PUREI_HELPY	UREASE ALPHA SUBUNIT	HELICOBACTER PYLORI	15-42								
PUREI_PROMI	UREASE ALPHA SUBUNIT	PROTEUS MIRABILIS	72-99								
PUREI_PROVU	UREASE ALPHA SUBUNIT	PROTEUS VULGARIS	72-99								
PUREI_UREUR	UREASE ALPHA SUBUNIT	UREAPLASMA UREALYTICUM	13-40	483-517							
PUREZ_HELPY	UREASE BETA SUBUNIT	HELICOBACTER PYLORI	62-99								
PURED_HELPY	UREASE OPERON URED PROTEIN	HELICOBACTER PYLORI	17-44								
PUREE_PROMI	UREASE ACCESSORY PROTEIN UREE	PROTEUS MIRABILIS	57-84								
PUREF_KLEAE	UREASE ACCESSORY PROTEIN UREF PRECURSOR	KLEBSIELLA AEROGENES	20-47								
PUS43_LACLA	SECRETED 43 KD PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	44-98	150-223	276-303						
PUSHA_ECOLI	P-SUGAR HYDROLASE PRECURSOR	ESCHERICHIA COLI	56-83								
PUSHA_SALTY	SILENT PROTEIN USHA(0) PRECURSOR	SALMONELLA TYPHIMURIUM	56-83								
PUVRA_ECOLI	EXCINUCLEASE ABC SUBUNIT A	ESCHERICHIA COLI	527-554	871-898							
PUVRA_MICLU	EXCINUCLEASE ABC SUBUNIT A	MICROCOCCUS LUTEUS	579-606	619-646	684-718	922-949					
PUVRA_PARDE	EXCINUCLEASE ABC SUBUNIT A	PARACOCCUS DENITRIFICANS	33-60								
PUVRC_BACSU	EXCINUCLEASE ABC SUBUNIT C	BACILLUS SUBTILIS	342-372	511-538							
PUVRC_ECOLI	EXCINUCLEASE ABC SUBUNIT C	ESCHERICHIA COLI	37-64	332-362							
PUVRD_ECOLI	HELICASE II	ESCHERICHIA COLI	280-307								
PVANA_ENTFC	VANCOMYCIN RESISTANCE PROTEIN VANA	ENTEROCOCCUS FAECIUM	182-209								
PVANC_ENTGA	VANCOMYCIN RESISTANCE PROTEIN VANC	ENTEROCOCCUS GALLINARUM	177-211								
PVIB4_AGRT5	VIRB4 PROTEIN PRECURSOR	AGROBACTERIUM TUMEFACIENS	138-172								
PVIB6_AGRT5	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227								
PVIB6_AGRT6	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227								
PVIB6_AGRT9	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227								
PVIBX_AGRT5	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239							
PVIBX_AGRT6	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	211-238							
PVIBX_AGRT9	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239							
PVIC1_AGRRA	VIRC1 PROTEIN	AGROBACTERIUM RHIZOGENES TUMEFACIENS	81-108								
PVIC1_AGRT5	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108								
PVIC1_AGRT6	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108								
PVID3_AGRRA	VIRD3 PROTEIN	AGROBACTERIUM RHIZOGENES	149-176	265-292							
PVIRA_AGRT5	WIDE HOST RANGE (WHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-76	113-147	657-684						
PVIRA_AGRT6	WIDE HOST RANGE (WHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680						
PVIRA_AGRT9	WIDE HOST RANGE (WHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680						
PVIRB_SHIFL	VIRB TRANSCRIPTIONAL ACTIVATOR	SHIGELLA FLEXNERI	37-71	107-134	187-214	252-291					
PVIRF_YEREN	VIRULENCE REGULON TRANSACTIVATOR	YERSINIA ENTEROCOLITICA	16-46								
PVIRG_AGRRA	VIRG REGULATORY PROTEIN	AGROBACTERIUM RHIZOGENES	34-61								
PVIRL_AGRT6	LIMITED HOST RANGE (LHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	106-157								

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FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVISC_ECOLI	VISC PROTEIN	ESCHERICHIA COLI	47-74								
PVLPA_MYCHR	VARIANT SURFACE ANTIGEN A PRECURSOR	MYCOPLASMA HYORHINIS	74-112								
PVM103_BORHE	OUTER MEMBRANE LIPOPROTEIN 3 PRECURSOR	BORRELIA HERMSII	54-81								
PVM107_BORHE	OUTER MEMBRANE LIPOPROTEIN 7 PRECURSOR	BORRELIA HERMSII	332-359								
PVM121_BORHE	OUTER MEMBRANE LIPOPROTEIN 21 PRECURSOR	BORRELIA HERMSII	330-357								
PVM124_BORHE	OUTER MEMBRANE LIPOPROTEIN 24 PRECURSOR	BORRELIA HERMSII	47-143								
PVM25_BORHE	OUTER MEMBRANE LIPOPROTEIN 25 PRECURSOR	BORRELIA HERMSII	315-356								
PVNFA_AZOVI	NITROGEN FIXATION PROTEIN VNFA	AZOTOBACTER VINELANDII	158-188	218-245							
PVNFK_AZOCH	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	68-95								
PVNFK_AZOVI	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER VINELANDII	68-95	372-403							
PVRP2_SALCH	65 KD VIRULENCE PROTEIN	SALMONELLA CHOLERAE-SUIS	509-536								
PVRP2_SALDU	65 KD VIRULENCE PROTEIN	SALMONELLA DUBLIN	511-538								
PVSDE_SALDU	VIRULENCE PROTEIN VSDE	SALMONELLA DUBLIN	3-36								
PVVHB_VIBVU	CYTOLYSIN SECRETION PROTEIN	VIBRIO VULNIFICUS	30-75								
PWAPA_STRMU	WALL-ASSOCIATED PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	4-41	313-386							
PWRBA_ECOLI	TRP REPRESSOR BINDING PROTEIN	ESCHERICHIA COLI	89-116								
PX191_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PX192_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PX193_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PXISA_ANASP	EXCISASE A	ANABAENA SP	4-31	89-116	135-162						
PXPRB_ECOLI	POSSIBLE INTEGRASE/RECOMBINASE XPRB	ESCHERICHIA COLI	268-295								
PXYLA_STAXY	XYLOSE ISOMERASE	STAPHYLOCOCCUS XYLOSUS	411-438								
PXYLK_KLEAE	XYLULOSE KINASE	KLEBSIELLA AEROGENES	2-29								
PXYLK_LACPE	XYLULOSE KINASE	LACTOBACILLUS PENTOSUS	52-79	211-238	260-287						
PXYLK_STAXY	XYLULOSE KINASE	STAPHYLOCOCCUS XYLOSUS	4-31	96-130	209-236	246-273					
PXYLR_BACSU	XYLOSE REPRESSOR	BACILLUS SUBTILIS	75-102	260-287							
PXYLR_LACPE	XYLOSE REPRESSOR	LACTOBACILLUS PENTOSUS	262-289								
PXYLR_STAXY	XYLOSE REPRESSOR	STAPHYLOCOCCUS XYLOSUS	20-64	101-158	181-215	221-255	274-301				
PXYLZ_PSEPU	ELECTRON TRANSFER COMPONENT	PSEUDOMONAS PUTIDA	51-78	104-131							
PXYN4_CALSA	PUTATIVE ENDO-1,4-BETA-XYLANASE	CALDOCELLUM SACCHAROLYTICUM	198-225								
PXYNA_BACCI	O-1,4-BETA-XYLANASE PRECURSOR	BACILLUS CIRCULANS	47-74								
PXYNA_BACSS	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SP	173-200								
PXYNA_BACSU	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SUBTILIS	47-74								
PXYNA_CALSA	ENDO-1,4-BETA-XYLANASE A PRECURSOR	CALDOCELLUM SACCHAROLYTICUM	132-159	226-256							
PXYNA_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	33-82								
PXYNB_BACPU	BETA-XYLOSIDASE	BACILLUS PUMILUS	459-486								
PXYNB_CALSA	BETA-XYLOSIDASE	CALDOCELLUM SACCHAROLYTICUM	440-474								
PXYNB_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	251-278	317-344	475-502					
PXYNC_PSEFL	ALPHA-L-ARABINOFURANOSIDASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	251-278							
PXYNC_STRLI	ENDO-1,4-BETA-XYLANASE C PRECURSOR	STREPTOMYCES LIVIDANS	183-210								
PY14K_HALMO	HYPOTHETICAL 14.9 KD PROTEIN	HALOCOCCUS MORRHUAE	56-83								
PY23K_STRGR	HYPOTHETICAL 23.1 KD PROTEIN	STREPTOCOCCUS ORALIS	78-105								
PY36K_METSM	HYPOTHETICAL 36.7 KD PROTEIN	METHANOBREVIDACTER SMITHII	128-162	172-218							
PYAAC_ECOLI	HYPOTHETICAL 34.6 KD PROTEIN	ESCHERICHIA COLI	271-298								
PYAAC_PSEFL	HYPOTHETICAL 33.9 KD PROTEIN	PSEUDOMONAS FLUORESCENS	274-301								
PYAAM_ECOLI	HYPOTHETICAL 59.1 KD PROTEIN	ESCHERICHIA COLI	45-72								
PYAAP_ECOLI	HYPOTHETICAL 56.6 KD PROTEIN	ESCHERICHIA COLI	352-379								
PYAAQ_ECOLI	HYPOTHETICAL 28.5 KD PROTEIN	ESCHERICHIA COLI	155-182								
PYABC_ECOLI	HYPOTHETICAL 34.9 KD PROTEIN	ESCHERICHIA COLI	131-158								
PYABG_ECOLI	HYPOTHETICAL 89.7 KD PROTEIN	ESCHERICHIA COLI	446-480	627-654							
PYABN_ECOLI	HYPOTHETICAL 63.9 KD PROTEIN	ESCHERICHIA COLI	428-455								
PYAC3_PSEAE	HYPOTHETICAL 23.9 KD PROTEIN	PSEUDOMONAS AERUGINOSA	48-75	150-177							
PYAD2_CLOAB	HYPOTHETICAL 21.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	75-109	114-144							
PYAD5_CLOAB	HYPOTHETICAL 36.9 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	132-159	165-196	210-237						
PYAD6_CLOAB	HYPOTHETICAL PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	21-55								
PYADA_YEREN	INVASIN PRECURSOR	YERSINIA ENTEROCOLITICA	196-230	247-274	318-381						
PYADA_YERPS	INVASIN PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	255-282	297-360							

PCGENE	107x178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYADC_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	13-40	101-131							
PYAEA_RICRI	17 KD PROTEIN	RICKETTSIA RICKETTSII	107-134								
PYAFB_ECOLI	HYPOTHETICAL 29 4 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYAFD_ECOLI	HYPOTHETICAL 29 1 KD PROTEIN	ESCHERICHIA COLI	34-71								
PYAFE_ECOLI	HYPOTHETICAL 23 0 KD PROTEIN	ESCHERICHIA COLI	123-150								
PYAIB_ESCFE	HYPOTHETICAL PROTEIN	ESCHERICHIA FERGUSONII	2-35								
PYAMI_SALTY	PUTATIVE AMIDASE	SALMONELLA TYPHIMURIUM	73-100								
PYATI_SYNY3	HYPOTHETICAL 13 0 KD PROTEIN	SYNECHOCYSTIS SP	26-60								
PYATP_MYCLE	HYPO PROTEIN PUTATIVE ATP OPERON	MYCOBACTERIUM LEPRAE	23-57	91-158	511-538						
PYATR_BACFI	HYPOL ATP-BINDING TRANSPORT PROTEIN	BACILLUS FIRMUS	211-238								
PYATS_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	7-41								
PYATU_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	29-56	60-87							
PYAVS_XANCV	HYPOTHETICAL 30 KD AVIRULENCE PROTEIN	XANTHOMONAS CAMPESTRIS	68-98	199-226							
PYBAH_ECOLI	HYPOTHETICAL 24 8 KD PROTEIN	ESCHERICHIA COLI	49-79								
PYBBA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	6-69								
PYBED_ECOLI	HYPOTHETICAL 9 8 KD PROTEIN	ESCHERICHIA COLI	51-82								
PYBID_ECOLI	HYPOTHETICAL 14 1 KD PROTEIN	ESCHERICHIA COLI	97-124								
PYCAE_ECOLI	HYPOTHETICAL 24 5 KD PROTEIN	ESCHERICHIA COLI	34-61								
PYCBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	38-65								
PYCBL_BACUN	HYPOTHETICAL 17 3 KD PROTEIN	BACTEROIDES UNIFORMIS	66-100								
PYCEA_BACLA	HYPOTHETICAL PROTEIN	BACILLUS LAUTUS	111-138								
PYCFC_ECOLI	HYPOTHETICAL 22 9 KD PROTEIN	ESCHERICHIA COLI	52-79								
PYCHR_ALCEU	HYPOTHETICAL PROTEIN	ALCALIGENES EUTROPHUS	21-48								
PYCIB_ECOLI	HYPOTHETICAL 20 8 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYCIF_ECOLI	18 6 KD PROTEIN	ESCHERICHIA COLI	7-68	134-166							
PYCIK_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	35-62								
PYCLI_ECOLI	HYPOTHETICAL 43 3 KD PROTEIN	ESCHERICHIA COLI	54-81								
PYCPJ_SYNPY	HYPOTHETICAL 29 3 KD PROTEIN	SYNECHOCOCCUS SP	194-221								
PYCPJ_SYNY3	HYPOTHETICAL 28 0 KD PROTEIN	SYNECHOCYSTIS SP	7-34	120-154							
PYCPS_SYNY3	HYPOTHETICAL 39 5 KD PROTEIN	SYNECHOCYSTIS SP	277-308								
PYCPG_MASLA	HYPOTHETICAL PROTEIN	MASTIGOCLADUS LAMINOSUS	2-29								
PYCPY_PSEA9	HYPO PHYCOCYANIN OPERON PROTEIN Y	PSEUDANABAENA SP	380-407								
PYCRJ_BACTK	HYPOTHETICAL 29 1 KD PROTEIN	BACILLUS THURINGIENSIS	42-74	153-180							
PYCSS_ECOLI	HYPOTHETICAL PROTEIN PRECURSOR	ESCHERICHIA COLI	32-59								
PYCWS_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	3-30	59-86							
PYDJM_HERAU	HYPOTHETICAL 68 4 KD PROTEIN	HERPETOSIPHON AURANTIACUS	12-39	151-178	360-416						
PYDBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	32-66	117-144	163-216	233-267	295-329	458-485	676-717	1136-1163	1499-1530
PYDDD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	80-107								
PYDDB_ECOLI	HYPOTHETICAL 86 7 KD PROTEIN	ESCHERICHIA COLI	606-641	683-714	726-753						
PYDDC_ECOLI	HYPOTHETICAL 80 8 KD PROTEIN	ESCHERICHIA COLI	373-400	421-452	621-648						
PYDDD_ECOLI	HYPOTHETICAL 24 1 KD PROTEIN	ESCHERICHIA COLI	133-174								
PYDEH_ECOLI	HYPOTHETICAL 20 5 KD PROTEIN	ESCHERICHIA COLI	96-130								
PYDEJ_ECOLI	HYPOTHETICAL 18 3 KD PROTEIN	ESCHERICHIA COLI	4-38								
PYDEK_ECOLI	HYPOTHETICAL 65 5 KD PROTEIN	ESCHERICHIA COLI	333-360	524-551	565-592						
PYDNN_BORBU	HYPOTHETICAL 11.2 KD PROTEIN	BORRELIA BURGDORFERI	6-36								
PYDOI_SULSO	HYPOTHETICAL 14 7 KD PROTEIN	SULFOLOBUS SOLFATARICUS	17-58	71-103							
PYDOJ_SULSO	HYPOTHETICAL 16 9 KD PROTEIN	SULFOLOBUS SOLFATARICUS	11-38								
PYEBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	93-120								
PYEBG_ECOLI	HYPOTHETICAL 10 7 KD PROTEIN	ESCHERICHIA COLI	50-77								
PYEEE_ECOLI	HYPOTHETICAL 38 1 KD PROTEIN	ESCHERICHIA COLI	43-70								
PYEEF_ECOLI	HYPO 49 8 KD TRANSPORT PROTEIN	ESCHERICHIA COLI	147-174								
PYEGA_ECOLI	HYPOTHETICAL IN DCD 3'REGION	ESCHERICHIA COLI	145-172								
PYEHA_ECOLI	HYPOTHETICAL 36 9 KD PROTEIN	ESCHERICHIA COLI	69-106	283-310							
PYEHB_ECOLI	HYPOTHETICAL 92 3 KD PROTEIN	ESCHERICHIA COLI	151-178	501-545							
PYEHD_ECOLI	HYPOTHETICAL 19 1 KD PROTEIN	ESCHERICHIA COLI	96-123								
PYEHF_ECOLI	HYPOTHETICAL 141.0 KD PROTEIN	ESCHERICHIA COLI	543-570								
PYEHI_ECOLI	HYPOTHETICAL 138 1 KD PROTEIN	ESCHERICHIA COLI	35-70	102-129							

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FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYEHU_ECOLI	HYPOTHETICAL 62 1 KD PROTEIN	ESCHERICHIA COLI	326-353								
PYEIC_ECOLI	HYPOTHETICAL 33 6 KD PROTEIN	ESCHERICHIA COLI	46-80								
PYEIF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	61-88								
PYEIJ_ECOLI	HYPOTHETICAL 43 4 KD PROTEIN	ESCHERICHIA COLI	15-42								
PYEJA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	83-110								
PYEJF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	453-480								
PYEJO_ECOLI	HYPOTHETICAL 91 2 KD PROTEIN	ESCHERICHIA COLI	399-433								
PYEHD_ECOLI	HYPOTHETICAL 40 6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYFU2_BACST	HYPOTHETICAL 30 6 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	133-160								
PYFXK_BRAJA	HYPOTHETICAL PROTEIN	BRADYRHIZOBIUM JAPONICUM	109-150								
PYGAP_BACME	HYPOTHETICAL 37.7 KD PROTEIN	BACILLUS MEGATERIUM	40-67								
PYGFD_ECOLI	HYPOTHETICAL 29 4 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYGGB_ECOLI	HYPOTHETICAL 30 9 KD PROTEIN	ESCHERICHIA COLI	225-252								
PYGGG_ECOLI	HYPOTHETICAL 31 8 KD PROTEIN	ESCHERICHIA COLI	209-236								
PYGI2_BACTU	HYPOTHETICAL 22 8 KD PROTEIN	BACILLUS THURINGIENSIS	26-61								
PYGI2_PSEPU	HYPOTHETICAL 32 4 KD PROTEIN	PSEUDOMONAS PUTIDA	145-172								
PYGIF_ECOLI	HYPOTHETICAL 48 4 KD PROTEIN	ESCHERICHIA COLI	223-264								
PYGL4_BACST	HYPOTHETICAL 35 5 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	6-33								
PYGLS_BACST	HYPOTHETICAL PROTEIN	BACILLUS STEAROTHERMOPHILUS	182-209								
PYGLN_BACCE	HYPOTHETICAL 15 KD PROTEIN	BACILLUS CEREUS	79-124								
PYGRD_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	20-47								
PYGRE_BACSU	HYPOTHETICAL 17.1 KD PROTEIN	BACILLUS SUBTILIS	84-111								
PYGRP_BACSU	HYPOTHETICAL 39 0 KD PROTEIN	BACILLUS SUBTILIS	98-125								
PYGRP_CLOAB	HYPOTHETICAL 38 8 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	160-210								
PYGT2_STRMU	HYPOTHETICAL PROTEIN 2	STREPTOCOCCUS MUTANS	4-40	110-138	235-262						
PYHAB_ECOLI	HYPOTHETICAL 20 6 KD PROTEIN	ESCHERICHIA COLI	20-66								
PYHAC_ECOLI	HYPOTHETICAL 45 2 KD PROTEIN	ESCHERICHIA COLI	69-96								
PYHAF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	44-71	138-165							
PYHBG_ECOLI	PROBABLE ABC TRANSPORTER	ESCHERICHIA COLI	176-203								
PYHBG_PSEPU	PROBABLE ABC TRANSPORTER	PSEUDOMONAS PUTIDA	74-101	106-133	147-174						
PYHBG_THIFE	PROBABLE ABC TRANSPORTER	THIOBACILLUS FERROOXIDANS	113-140								
PYHDF_ECOLI	HYPOTHETICAL 55 4 KD PROTEIN	ESCHERICHIA COLI	267-297								
PYHEM_BACSU	HYPOTHETICAL 32 0 KD PROTEIN	BACILLUS SUBTILIS	222-253								
PYHET_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	72-99								
PYHHA_ECOLI	HYPOTHETICAL 16 6 KD PROTEIN	ESCHERICHIA COLI	56-84								
PYHHG_ECOLI	HYPOTHETICAL 13 1 KD PROTEIN	ESCHERICHIA COLI	43-77								
PYHHH_ECOLI	HYPOTHETICAL 14 5 KD PROTEIN	ESCHERICHIA COLI	43-73								
PYHII_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	167-194								
PYHIJ_LACLA	HYPOTHETICAL 38 0 KD PROTEIN	LACTOCOCCUS LACTIS	90-124	132-159							
PYHI6_LACLA	HYPOTHETICAL 30 7 KD PROTEIN	LACTOCOCCUS LACTIS	92-148								
PYHI8_LACLA	HYPOTHETICAL 30 7 KD PROTEIN	LACTOCOCCUS LACTIS	77-104	156-183							
PYHJI_STAAU	HYPOTHETICAL PROTEIN	STAPHYLOCOCCUS AUREUS	18-67								
PYHJD_VIBCH	HYPOTHETICAL 18 3 KD PROTEIN	VIBRIO CHOLERAE	99-126								
PYHKF_METFE	HYPOTHETICAL 32 2 KD PROTEIN	METHANOTHERMUS FERVIDUS	106-133								
PYHS1_CLOAB	HYPOTHETICAL 11 0 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	41-85								
PYHSA_CLOAB	HYPOTHETICAL 20 6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	98-125								
PYHSC_CLOAB	HYPOTHETICAL 42 4 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	25-52	208-253	276-310						
PYHVI_LACHE	HYPOTHETICAL PROTEIN	LACTOBACILLUS HELVETICUS	93-120	127-154							
PYHYA_PSESN	HYPOTHETICAL PROTEIN	PSEUDOMONAS SP	217-266								
PYI11_HALHA	HYPOTHETICAL 38 0 KD PROTEIN	HALOBACTERIUM HALOBIUM	245-272								
PYI33_MYCBU	IS986 HYPOTHETICAL 6 6 KD PROTEIN	MYCOBACTERIUM TUBERCULOSIS	19-46								
PYI42_PSEAY	HYPOTHETICAL 42 6 KD PROTEIN	PSEUDOMONAS AMYLODERAMOSA	9-36								
PYI48_METTM	ISM1 HYPOTHETICAL 48.3 KD PROTEIN	METHANOBREVIBACTER SMITHII	73-100	154-184	338-365						
PYI57_HALHA	HYPOTHETICAL 31 KD PROTEIN	HALOBACTERIUM HALOBIUM	86-113								
PYIDD_ECOLI	HYPOTHETICAL 34.0 KD PROTEIN	ESCHERICHIA COLI	202-239								
PYIDD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	9-43								
PYIBF_ECOLI	HYPOTHETICAL 22 6 KD PROTEIN	ESCHERICHIA COLI	131-158								

PCGENE	107s178s4	Prokaryotic Sequences									
TITLE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYIBQ_ECOLI	HYPOTHETICAL 18 1 KD PROTEIN	ESCHERICHIA COLI	70-97								
PYICC_ECOLI	HYPOTHETICAL 33.2 KD PROTEIN	ESCHERICHIA COLI	143-170								
PYICD_ECOLI	HYPOTHETICAL 31 1 KD PROTEIN	ESCHERICHIA COLI	132-159								
PYICH_ECOLI	HYPOTHETICAL 62 3 KD PROTEIN	ESCHERICHIA COLI	408-435								
PYICI_ECOLI	HYPOTHETICAL 88 1 KD PROTEIN	ESCHERICHIA COLI	122-149								
PYICN_ECOLI	HYPOTHETICAL 18 2 KD PROTEIN	ESCHERICHIA COLI	76-103								
PYICO_ECOLI	HYPOTHETICAL 49 9 KD PROTEIN	ESCHERICHIA COLI	320-347								
PYIDB_ECOLI	HYPOTHETICAL 13 8 KD PROTEIN	ESCHERICHIA COLI	34-78								
PYIDE_ECOLI	HYPOTHETICAL 58 9 KD PROTEIN	ESCHERICHIA COLI	86-113	182-209	277-304						
PYIDI_ECOLI	HYPOTHETICAL 15 7 KD PROTEIN	ESCHERICHIA COLI	56-83								
PYIDK_ECOLI	HYPOTHETICAL 62 1 KD PROTEIN	ESCHERICHIA COLI	2-39								
PYIDP_ECOLI	HYPOTHETICAL 27 3 KD PROTEIN	ESCHERICHIA COLI	63-97								
PYIEA_ECOLI	HYPOTHETICAL 49 2 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYIEC_ECOLI	HYPOTHETICAL 60 6 KD PROTEIN	ESCHERICHIA COLI	20-58	270-297							
PYIEC_ERWCH	HYPOTHETICAL PROTEIN	ERWINIA CHRYSANTHEMI	22-67								
PYIED_ECOLI	HYPOTHETICAL 34 8 KD PROTEIN	ESCHERICHIA COLI	86-120								
PYIEG_ECOLI	HYPOTHETICAL 46 9 KD PROTEIN	ESCHERICHIA COLI	293-327								
PYIEH_ECOLI	HYPOTHETICAL 24 7 KD PROTEIN	ESCHERICHIA COLI	51-78								
PYIEM_ECOLI	HYPOTHETICAL 13 0 KD PROTEIN	ESCHERICHIA COLI	73-105								
PYIEO_ECOLI	HYPOTHETICAL 51.5 KD PROTEIN	ESCHERICHIA COLI	201-242	380-407							
PYIFC_ECOLI	HYPOTHETICAL 39 6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYIGJ_ECOLI	HYPOTHETICAL 14 0 KD PROTEIN	ESCHERICHIA COLI	51-92								
PYIGM_ECOLI	HYPOTHETICAL 33.7 KD PROTEIN	ESCHERICHIA COLI	120-154								
PYIGN_ECOLI	HYPOTHETICAL 54.7 KD PROTEIN	ESCHERICHIA COLI	207-234								
PYIGO_ECOLI	HYPOTHETICAL 28 1 KD PROTEIN	ESCHERICHIA COLI	67-94								
PYIGP_ECOLI	HYPOTHETICAL 22.3 KD PROTEIN	ESCHERICHIA COLI	173-200								
PYIGT_ECOLI	HYPOTHETICAL 27.8 KD PROTEIN	ESCHERICHIA COLI	132-159								
PYIHB_ECOLI	HYPOTHETICAL 21.2 KD PROTEIN	ESCHERICHIA COLI	13-40								
PYIHD_ECOLI	HYPOTHETICAL 10 3 KD PROTEIN	ESCHERICHIA COLI	28-55								
PYIHF_ECOLI	HYPOTHETICAL 54 1 KD PROTEIN	ESCHERICHIA COLI	272-306								
PYIHI_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	112-139								
PYIHK_ECOLI	HYPOTHETICAL 65.4 KD PROTEIN	ESCHERICHIA COLI	4-31								
PYIHM_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	83-110	120-154	297-324						
PYIHO_ECOLI	HYPOTHETICAL 81.8 KD PROTEIN	ESCHERICHIA COLI	612-646								
PYIHP_ECOLI	HYPOTHETICAL 53.1 KD PROTEIN	ESCHERICHIA COLI	357-384								
PYIHV_ECOLI	HYPOTHETICAL 31.9 KD PROTEIN	ESCHERICHIA COLI	72-99								
PYIHX_ECOLI	HYPOTHETICAL 23.5 KD PROTEIN	ESCHERICHIA COLI	9-36								
PYIHZ_ECOLI	HYPOTHETICAL 13 9 KD PROTEIN	ESCHERICHIA COLI	6-33								
PYIIP_ECOLI	HYPOTHETICAL 32.9 KD PROTEIN	ESCHERICHIA COLI	22-63								
PYIIU_ECOLI	HYPOTHETICAL 9.6 KD PROTEIN	ESCHERICHIA COLI	28-71								
PYIJC_ECOLI	HYPOTHETICAL 26 6 KD PROTEIN	ESCHERICHIA COLI	136-163								
PYIJH_ECOLI	HYPOTHETICAL 78 3 KD PROTEIN	ESCHERICHIA COLI	225-263								
PYIJK_ECOLI	HYPOTHETICAL 11 2 KD PROTEIN	ESCHERICHIA COLI	26-53								
PYIJO_ECOLI	HYPOTHETICAL 32 1 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYIJP_ECOLI	HYPOTHETICAL 66 6 KD PROTEIN	ESCHERICHIA COLI	110-137	419-446							
PYIML_LISMO	HYPOTHETICAL 26.8 KD PROTEIN	LISTERIA MONOCYTOGENES	7-34								
PYISI_SHISO	INSERTION ELEMENT IS600	SHIGELLA SONNEI	62-89								
PYISI_STRCO	IS110 HYPOTHETICAL 43.6 KD PROTEIN	STREPTOMYCES COELICOLOR	125-152								
PYISJ_SHISO	INSERTION ELEMENT IS629	SHIGELLA SONNEI	66-100								
PYISP_BACSP	HYPOTHETICAL 42.1 KD PROTEIN	BACILLUS SP	312-339								
PYJAG_ECOLI	HYPOTHETICAL 22 6 KD PROTEIN	ESCHERICHIA COLI	51-78								
PYJAJ_ECOLI	HYPOTHETICAL 20.4 KD PROTEIN	ESCHERICHIA COLI	88-122								
PYJBH_ECOLI	HYPOTHETICAL 78.5 KD PROTEIN	ESCHERICHIA COLI	93-120								
PYJBL_ECOLI	HYPOTHETICAL 9.7 KD PROTEIN	ESCHERICHIA COLI	30-57								
PYJBM_ECOLI	HYPOTHETICAL 26.7 KD PROTEIN	ESCHERICHIA COLI	112-149								
PYJBQ_ECOLI	HYPOTHETICAL 15.7 KD PROTEIN	ESCHERICHIA COLI	2-29								
PYJCC_ECOLI	HYPOTHETICAL 60 8 KD PROTEIN	ESCHERICHIA COLI	38-65	414-441	451-492						

PCGENE	10?a17814	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA4	AREA1	AREA4	AREA1	AREA1	AREA2
PYICE_ECOLI	HYPOTHETICAL 60.5 KD PROTEIN	ESCHERICHIA COLI	434-481								
PYICO_ECOLI	HYPOTHETICAL 59.2 KD PROTEIN	ESCHERICHIA COLI	394-421								
PYICO_ECOLI	HYPOTHETICAL 25.1 KD PROTEIN	ESCHERICHIA COLI	91-118								
PYICP_ECOLI	HYPOTHETICAL 53.4 KD PROTEIN	ESCHERICHIA COLI	242-289								
PYICS_ECOLI	HYPOTHETICAL 71.7 KD PROTEIN	ESCHERICHIA COLI	366-396								
PYICW_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	50-84								
PYIDA_ECOLI	HYPOTHETICAL 84.2 KD PROTEIN	ESCHERICHIA COLI	2-29	451-485							
PYIDB_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	103-134								
PYIJA_ECOLI	HYPOTHETICAL 17.5 KD PROTEIN PRECURSOR	ESCHERICHIA COLI	33-69	88-129							
PYKAB_BACFI	HYPOTHETICAL 48.8 KD PROTEIN	BACILLUS FIRMUS	331-335								
PYLAI_LACAC	HYPOTHETICAL PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAJ_LACAC	HYPOTHETICAL 14.5 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	13-42								
PYLAJ_LACAC	HYPOTHETICAL 14.4 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAC_SULSO	HYPOTHETICAL 24.4 KD PROTEIN	SULFOLOBUS SOLFATARICUS	23-50								
PYLPJ_PSEPU	HYPOTHETICAL 44.7 KD PROTEIN	PSEUDOMONAS PUTIDA	186-213	314-341							
PYLPA_YEREN	YLPA LIPOPROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	184-221								
PYLTJ_ANAVA	HYPOTHETICAL 22.6 KD PROTEIN	ANABAENA VARIABILIS	172-199								
PYLUD_LACLA	HYPOTHETICAL 29.7 KD PROTEIN	LACTOCOCCUS LACTIS	35-70								
PYMEJ_BACSU	HYPOTHETICAL 33.3 KD PROTEIN	BACILLUS SUBTILIS	52-79								
PYMG2_MYCGE	HYPOTHETICAL 114.4 KD PROTEIN PRECURSOR	MYCOPLASMA GENITALIUM	56-83	159-193	420-445	981-1008					
PYNGA_CLOPE	HYPOTHETICAL PROTEIN	CLOSTRIDIUM PERFRINGENS	119-166								
PYNGB_CLOPE	HYPOTHETICAL 31.2 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	12-49	63-97	182-211						
PYNII_METTL	HYPOTHETICAL PROTEIN	METHANOCOCCUS THERMOLITHOTROPHICUS	55-89								
PYNQI_PARDE	HYPOTHETICAL 9.3 KD PROTEIN	PARACOCCUS DENITRIFICANS	52-86								
PYNTJ_ANASP	HYPOTHETICAL 28.1 KD PROTEIN	ANABAENA SP	131-198								
PYNTS_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	87-165								
PYOHD_ECOLI	HYPOTHETICAL 21.4 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYOHG_ECOLI	HYPOTHETICAL 41.1 KD PROTEIN	ESCHERICHIA COLI	104-131	289-316							
PYOIA_ECOLI	HYPOTHETICAL 13.6 KD PROTEIN	ESCHERICHIA COLI	17-44								
PYOIE_ECOLI	HYPOTHETICAL 91.5 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYOIF_ECOLI	HYPOTHETICAL 9.3 KD PROTEIN	ESCHERICHIA COLI	41-82								
PYOIH_ECOLI	HYPOTHETICAL 34.1 KD PROTEIN	ESCHERICHIA COLI	145-193								
PYOIJ_ECOLI	HYPOTHETICAL 36.1 KD PROTEIN	ESCHERICHIA COLI	94-121								
PYOM2_PHOSP	HYPOTHETICAL PROTEIN IN OMPH 3'REGION	PHOTOBACTERIUM SP	32-59								
PYOPH_YEREN	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA ENTEROCOLITICA	63-105								
PYOPH_YERPS	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA PSEUDOTUBERCULOSIS	63-105								
PYOPN_YEREN	OUTER MEMBRANE PROTEIN YOPN	YERSINIA ENTEROCOLITICA	23-50	66-93	233-262						
PYOPN_YERPS	OUTER MEMBRANE PROTEIN YOPN	YERSINIA PSEUDOTUBERCULOSIS	23-50	66-93	233-262						
PYOPQ_YEREN	YOPQ PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	61-88								
PYORA_HAEIN	HYPOTHETICAL 31.5 KD PROTEIN	HAEMOPHILUS INFLUENZAE	147-174								
PYORA_LISMO	HYPOTHETICAL 23.6 KD PROTEIN	LISTERIA MONOCYTOGENES	32-77								
PYORA_PYRWO	HYPOTHETICAL 24.7 KD PROTEIN	PYROCOCCUS WOESEI	183-210								
PYORB_HAEIN	HYPOTHETICAL 19.0 KD PROTEIN	HAEMOPHILUS INFLUENZAE	39-66								
PYORC_HAEIN	HYPOTHETICAL 19.9 KD PROTEIN	HAEMOPHILUS INFLUENZAE	49-79								
PYORE_HAEIN	8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	47-74	82-109							
PYORF_HAEIN	26.1 KD PROTEIN	HAEMOPHILUS INFLUENZAE	199-229								
PYORH_HAEIN	HYPOTHETICAL 13.7 KD PROTEIN	HAEMOPHILUS INFLUENZAE	7-34								
PYORI_HAEIN	95.4 KD PROTEIN	HAEMOPHILUS INFLUENZAE	416-450	688-722							
PYORQ_BACSU	HYPOTHETICAL 34 KD PROTEIN	BACILLUS SUBTILIS	148-175								
PYORX_PYRWO	HYPOTHETICAL PROTEIN	PYROCOCCUS WOESEI	66-93								
PYORZ_LISMO	HYPOTHETICAL 16.9 KD PROTEIN	LISTERIA MONOCYTOGENES	27-54								
PYP15_STAAU	HYPOTHETICAL 15.5 KD PROTEIN	STAPHYLOCOCCUS AUREUS	71-98	110-137							
PYP1J_BACSU	HYPOTHETICAL 22.3 KD PROTEIN	BACILLUS SUBTILIS	57-84								
PYP2J_STAAU	HYPOTHETICAL 22.2 KD PROTEIN	STAPHYLOCOCCUS AUREUS	29-70								
PYP2A_STAAU	HYPOTHETICAL 26.9 KD PROTEIN	STAPHYLOCOCCUS AUREUS	34-104								
PYP3B_STAAU	HYPOTHETICAL 27.0 KD PROTEIN	STAPHYLOCOCCUS AUREUS	23-60	62-89	179-206						
PYP3C_STAAU	HYPOTHETICAL 27.7 KD PROTEIN	STAPHYLOCOCCUS AUREUS	13-83	129-176							

PCGENE	107a178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYP7_AGRT4	HYPOTHETICAL PROTEIN 7	AGROBACTERIUM TUMEFACIENS	29-56								
PYPAJ_LEGPN	HYPOTHETICAL PROTEIN	LEGIONELLA PNEUMOPHILA	94-135								
PYPAS_ENTFA	HYPOTHETICAL 13 KD PROTEIN	ENTEROCOCCUS FAECALIS	79-106								
PYPA_BACAN	HYPOTHETICAL 21.6 KD PROTEIN	BACILLUS ANTHRACIS	13-47	115-162							
PYPC1_ECOLI	HYPOTHETICAL 27.6 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYPDA_BACSU	HYPOTHETICAL 27.3 KD PROTEIN	BACILLUS SUBTILIS	184-222								
PYPFT_ECOLI	HYPOTHETICAL 12.6 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYPHI_SYNP2	HYPOTHETICAL 18.1 KD PROTEIN	SYNECHOCOCCUS SP	34-61								
PYPI6_CLOPE	HYPOTHETICAL 19.7 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	7-34	43-77	83-149						
PYPI9_CLOPE	HYPOTHETICAL 14.5 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	2-59								
PYPIX_CLOPE	HYPOTHETICAL 38.4 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	110-137	263-290	303-340						
PYPIY_PSEAE	HYPOTHETICAL 38.5 KD PROTEIN	PSEUDOMONAS AERUGINOSA	22-52								
PYPP_BACSU	HYPOTHETICAL PROCESSING PROTEASE	BACILLUS SUBTILIS	329-356								
PYPQQ_KLEPN	HYPOTHETICAL PROTEIN	KLEBSIELLA PNEUMONIAE	243-270								
PYPS2_PLEBO	HYPOTHETICAL 13.1 KD PROTEIN	PLECTONEMA BORYANUM	27-54								
PYPV1_METTF	HYPOTHETICAL 40.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYPV3_METTF	HYPOTHETICAL 22.5 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	3-30								
PYPV7_METTF	HYPOTHETICAL 17.3 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	69-117								
PYPVB_METTF	HYPOTHETICAL 49.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	333-360	389-430							
PYPYB_BACSU	HYPOTHETICAL 72.4 KD PROTEIN	BACILLUS SUBTILIS	602-636								
PYPZ1_METTF	HYPOTHETICAL 40.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYPZ2_METTF	HYPOTHETICAL 33.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	38-65	154-188							
PYPZ5_METTF	HYPOTHETICAL 54.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	193-220	226-253	381-408						
PYPZ7_METTF	HYPOTHETICAL 9.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	5-78								
PYRI8_THEPE	HYPOTHETICAL 18.7 KD PROTEIN	THERMOFILUM PENDENS	82-109								
PYRBI_HALCU	HYPOTHETICAL 40 KD GTP-BINDING PROTEIN	HALOBACTERIUM CUTIRUBRUM	20-51								
PYREC_SYNP2	HYPOTHETICAL 28.7 KD PROTEIN	SYNECHOCOCCUS SP	49-76								
PYRF0_SALTY	HYPOTHETICAL 40.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	143-190								
PYRF2_SALTY	HYPOTHETICAL 51.0 KD PROTEIN	SALMONELLA TYPHIMURIUM	428-455								
PYRF5_SALTY	HYPOTHETICAL 20.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	29-56								
PYRF6_SALTY	HYPOTHETICAL 36.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	130-157								
PYRG2_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	140-167								
PYRL1_METVA	HYPOTHETICAL PROTEIN	METHANOCOCCUS VANNIELII	40-93	129-156							
PYRP2_METVA	HYPOTHETICAL 11.6 KD PROTEIN	METHANOCOCCUS VANNIELII	13-40								
PYRP2_SULAC	HYPOTHETICAL 11.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	5-51								
PYRP3_SULAC	HYPOTHETICAL 14.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	37-71								
PYRTP_BACSU	HYPOTHETICAL 25.3 KD PROTEIN	BACILLUS SUBTILIS	29-56								
PYRTS_BACSU	HYPOTHETICAL 11.4 KD PROTEIN	BACILLUS SUBTILIS	3-30	44-81							
PYSCB_YEREN	HYPOTHETICAL YSC OPERON PROTEIN B	YERSINIA ENTEROCOLITICA	90-121								
PYSCC_YEREN	YSC OPERON PROTEIN C PRECURSOR	YERSINIA ENTEROCOLITICA	38-72	365-399							
PYSCD_YEREN	YSC OPERON PROTEIN D	YERSINIA ENTEROCOLITICA	242-269								
PYSCH_YEREN	YSC OPERON PROTEIN H	YERSINIA ENTEROCOLITICA	28-58								
PYSCH_YERPS	YSC OPERON PROTEIN H	YERSINIA PSEUDOTUBERCULOSIS	28-58								
PYSCI_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	49-76								
PYSCI_YERPS	YSC OPERON PROTEIN I	YERSINIA PSEUDOTUBERCULOSIS	49-76								
PYSCJ_YEREN	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA ENTEROCOLITICA	99-126								
PYSCJ_YERPS	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	99-126								
PYSCL_YEREN	YSC OPERON PROTEIN L	YERSINIA ENTEROCOLITICA	41-68								
PYSCL_YERPS	YSC OPERON PROTEIN L	YERSINIA PSEUDOTUBERCULOSIS	41-68								
PYSMA_SERMA	HYPOTHETICAL 9.5 KD PROTEIN	SERRATIA MARCESCENS	11-70								
PYSO2_DESAM	HYPOTHETICAL 28.3 KD PROTEIN	DESULFUROLOBUS AMBIVALENS	68-109								
PYSOJ_DESAM	HYPOTHETICAL PROTEIN	DESULFUROLOBUS AMBIVALENS	65-155								
PYSP2_LEPIN	HYPOTHETICAL PROTEIN	LEPTOSPIRA INTERROGANS	6-33	60-94							
PYSRI_MYCMY	HYPOTHETICAL PROTEIN	MYCOPLASMA MYCOIDES	35-99	185-227	300-327						
PYSYJ_BACSU	HYPOTHETICAL 19.6 KD PROTEIN	BACILLUS SUBTILIS	72-99								
PYSYN_METFE	HYPOTHETICAL PROTEIN	METHANOTHERMUS FERVIDUS	78-105								
PYT37_STRFR	HYPOTHETICAL 37.1 KD PROTEIN	STREPTOMYCES FRADIAE	246-273								

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PGENE	10:s17bc4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA2	AREA2	AREA4	AREA4	AREA7	AREA7	AREA8	AREA8
PYTDX_BACSU	HYPOTHETICAL 35.6 KD PROTEIN	BACILLUS SUBTILIS	244-271	279-306									
PYTRE_LEPBI	HYPOTHETICAL 22 KD PROTEIN	LEPTOSPIRA BIFLEXA	84-111										
PYTRJ_LACLA	HYPOTHETICAL 13.3 KD PROTEIN	LACTOCOCCUS LACTIS	76-112										
PYT51_BACSU	HYPOTHETICAL 20 KD PROTEIN	BACILLUS SUBTILIS	37-64										
PYT5F_SPICI	HYPOTHETICAL 21.8 KD PROTEIN	SPIROPLASMA CITRI	102-149										
PYX04_BACSU	HYPOTHETICAL 17.8 KD PROTEIN	BACILLUS SUBTILIS	37-64	68-95									
PYX06_BACSU	HYPOTHETICAL 21.0 KD PROTEIN	BACILLUS SUBTILIS	142-169										
PYX13_BACSU	HYPOTHETICAL 26.0 KD PROTEIN	BACILLUS SUBTILIS	17-51										
PYX15_BACSU	HYPOTHETICAL 61.8 KD PROTEIN	BACILLUS SUBTILIS	165-207	262-289									
PYX18_BACSU	HYPOTHETICAL 66.8 KD PROTEIN	BACILLUS SUBTILIS	1-30	34-61	94-143								
PYX19_BACSU	HYPOTHETICAL 31.3 KD PROTEIN	BACILLUS SUBTILIS	36-83	85-112									
PYX20_BACSU	HYPOTHETICAL 21.3 KD PROTEIN	BACILLUS SUBTILIS	24-58										
PYX12_ANASP	HYPOTHETICAL 18.9 KD PROTEIN	ANABAENA SP	77-104										
PYXYB_CALSA	HYPOTHETICAL 10.7 KD PROTEIN	CALDOCELLUM SACCHAROLYTICUM	9-39										
PYXYC_CALSA	HYPOTHETICAL PROTEIN	CALDOCELLUM SACCHAROLYTICUM	41-94										
PYZE1_ECOLI	HYPOTHETICAL 16.7 KD PROTEIN	ESCHERICHIA COLI	41-78										

TABLE IX

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL HUMAN PROTEINS

PCGENE	107s178s4 Motif Search on All Human Protein Sequences									
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
P143F_HUMAN	14-3-3 PROTEIN ETA (PROTEIN AS1) (FRAGMENT)	101-135								
P143S_HUMAN	14-3-3 PROTEIN HOMOLOG STRATIFIN	45-72								
P143T_HUMAN	14-3-3 PROTEIN THETA (14-3-3 PROTEIN T-CELL) (HS1 PROTEIN)	61-92								
P143Z_HUMAN	14-3-3 PROTEIN ZETA (PROTEIN KINASE C INHIBITOR PROTEIN-1) (KCIP-1)	28-55								
P1A23_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-29(AW-19) A*2901 ALPHA CHAIN	87-114								
P1A24_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-29(AW-19) A*2902 ALPHA CHAIN	87-114								
P1B02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-7 B*0702 ALPHA CHAIN	87-114								
P1B05_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-13 B*1301 ALPHA CHAIN	87-114	148-182							
P1B10_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-75(B-15) B*1502 ALPHA CHAIN	84-115								
P1B11_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, DW-72(BW-70) B*1503 ALPHA	84-115								
P1B12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-62 B*1504 ALPHA CHAIN	76-107								
P1B13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-18 B*1801 ALPHA CHAIN	84-115								
P1B21_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3501 ALPHA CHAIN	84-115								
P1B22_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3502 ALPHA CHAIN	84-115								
P1B23_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3503 ALPHA CHAIN	84-115								
P1B24_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3504 ALPHA CHAIN	76-107								
P1B25_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3505 ALPHA CHAIN	84-115								
P1B26_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3506 ALPHA CHAIN	84-115								
P1B27_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3507 ALPHA CHAIN	84-115								
P1B28_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3508 ALPHA CHAIN	84-115								
P1B29_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-37 B*3701 ALPHA CHAIN	88-115								
P1B32_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-39 B*3902 ALPHA CHAIN	87-114								
P1B33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-60(B-40) B*4001 ALPHA CHAIN	60-91								
P1B34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4002 ALPHA CHAIN	84-115								
P1B35_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4003 ALPHA CHAIN	84-115								
P1B36_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4004 ALPHA CHAIN	84-115								
P1B38_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-41 B*4101 ALPHA CHAIN	84-115								
P1B39_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-42 B*4201 ALPHA CHAIN	87-114								
P1B40_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4401 ALPHA CHAIN	84-111								
P1B41_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4402 ALPHA CHAIN	87-114								
P1B42_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4403 ALPHA CHAIN	87-114								
P1B43_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-45(B-12) B*4501 ALPHA CHAIN	84-115								
P1B44_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-46 B*4601 ALPHA CHAIN	87-114								
P1B45_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-47 B*4701 ALPHA CHAIN	88-115								
P1B46_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-48 B*4801 ALPHA CHAIN	84-115								
P1B47_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-49(B-21) B*4901 ALPHA CHAIN	87-114								
P1B48_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-50(B-21) B*5001 ALPHA CHAIN	84-115								
P1B53_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-52(B-5) B*5201 ALPHA CHAIN	87-114								
P1B55_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-54(BW-22) B*5401 ALPHA	87-114								
P1B56_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5501 ALPHA	87-114								
P1B57_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5502 ALPHA	87-114								
P1B58_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5601 ALPHA	87-114								
P1B59_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5602 ALPHA	87-114								
P1C01_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0101 ALPHA CHAIN	87-114								
P1C02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0102 ALPHA CHAIN	87-114								
P1C03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0201 ALPHA CHAIN	87-114								
P1C04_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0202 ALPHA CHAIN	87-114								
P1C06_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-3 CW*0302 ALPHA CHAIN	87-114								
P1C12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0801 ALPHA CHAIN	87-114								
P1C13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0802 ALPHA CHAIN	87-114								
P1C14_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0803 ALPHA CHAIN	87-114								
P1C17_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW*1401 ALPHA CHAIN PRECURSOR	87-114								
P25A6_HUMAN	69/71 KD (2'-5')OLIGOADENYLATE SYNTHETASE	593-620								
P2AAA_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, ALPHA ISOFORM	12-49	54-81							
P2AAB_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, BETA ISOFORM	9-36	41-68	79-106						
P2ABA_HUMAN	PROTEIN PHOSPHATASE PP2A, 55 KD REGULATORY SUBUNIT, ALPHA ISOFORM	177-218								
P411_HUMAN	ERYTHROID PROTEIN 4 1 (BAND 4 1, ERYTHROCYTE FORM)	32-66								

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FILENAME	PROTEIN	AREA 1	AREA 3	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
P412_HUMAN	NON-ERYTHROID PROTEIN 4 1 (BAND 4 1, LYMPHOID FORM)	3-30	708-735							
P42_HUMAN	ERYTHROCYTE MEMBRANE PROTEIN BAND 4 2	173-200	518-545							
P4F2_HUMAN	4F2 CELL-SURFACE ANTIGEN HEAVY CHAIN (4F2HC) (LYMPHOCYTE ACTIVATION	281-322								
P5HIE_HUMAN	5-HYDROXYTRYPTAMINE 1E RECEPTOR (5-HT-1E) (SEROTONIN RECEPTOR)	311-338								
P5HIF_HUMAN	5-HYDROXYTRYPTAMINE 1F RECEPTOR (5-HT-1F) (SEROTONIN RECEPTOR).	222-253								
P5H2A_HUMAN	5-HYDROXYTRYPTAMINE 2A RECEPTOR (5-HT-2A) (SEROTONIN RECEPTOR)	22-56								
P5H7_HUMAN	5-HYDROXYTRYPTAMINE 7 RECEPTOR (5-HT-7) (5-HT-X) (SEROTONIN RECEPTOR)	72-99								
PA1AC_HUMAN	ALPHA-1-ANTICHYMOTRYPSIN PRECURSOR (ACT).	98-132	330-357							
PA1AO_HUMAN	ALPHA-1-ACID GLYCOPROTEIN 1 PRECURSOR (OROSOMUCOID) (ORD).	92-119								
PA1AT_HUMAN	ALPHA-1-ANTITRYPSIN PRECURSOR (ALPHA-1 PROTEASE INHIBITOR) (ALPHA-1-	168-202								
PA1AU_HUMAN	ALPHA-1-ANTITRYPSIN-RELATED PROTEIN PRECURSOR.	163-197								
PA2AP_HUMAN	ALPHA-2-ANTIPLASMIN PRECURSOR (ALPHA-2-PLASMIN INHIBITOR) (ALPHA-2-	191-218	365-395							
PA2GL_HUMAN	LEUCINE-RICH ALPHA-2-GLYCOPROTEIN (LRG).	104-134								
PA2MG_HUMAN	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M)	53-80	319-349	1085-1112	1402-1429					
PA4_HUMAN	ALZHEIMER'S DISEASE AMYLOID A4 PROTEIN PRECURSOR (PROTEASE NEXIN-II)	428-455								
PAACT_HUMAN	ALPHA-ACTININ (F-ACTIN CROSS LINKING PROTEIN)	92-119	720-747							
PAATM_HUMAN	ASPARTATE AMINOTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2 6 1 1)	109-136								
PABP2_HUMAN	ENDOTHELIAL ACTIN-BINDING PROTEIN (ABP-280) (NONMUSCLE FILAMIN)	61-88	119-147	2604-2633						
PAC12_HUMAN	ACTIVATOR 1 37 KD SUBUNIT (REPLICATION FACTOR C 37 KD SUBUNIT) (A1	306-333								
PAC15_HUMAN	ACTIVATOR 1 140 KD SUBUNIT (REPLICATION FACTOR C LARGE SUBUNIT) (A1	14-51	182-209	668-700						
PACDL_HUMAN	ACYL-COA DEHYDROGENASE PRECURSOR, LONG-CHAIN SPECIFIC (EC 1 3 99 13)	78-108	179-206	313-340						
PACET_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, TESTIS-SPECIFIC (EC 3 4 15 1)	78-115	126-153	676-710						
PACE_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, SOMATIC (EC 3 4 15.1) (ACE)	652-689	700-727	1250-1284						
PACHA_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, ALPHA CHAIN PRECURSOR	48-80								
PACHE_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, EPSILON CHAIN PRECURSOR	46-98								
PACHG_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, GAMMA CHAIN PRECURSOR	45-79	304-331							
PACNP_HUMAN	NEURONAL ACETYLCHOLINE RECEPTOR PROTEIN, BETA-4 CHAIN (FRAGMENT)	29-56	70-97							
PACRO_HUMAN	ACROSIN PRECURSOR (EC 3.4.21.10).	122-149								
PACYM_HUMA	ACYLPHOSPHATASE, MUSCLE TYPE ISOZYME (EC 3 6.1.7) (ACYLPHOSPHATE	26-53								
PADT2_HUMAN	ADP,ATP CARRIER PROTEIN, FIBROBLAST ISOFORM (ADP/ATP TRANSLOCASE 2)	162-189								
PADT3_HUMAN	ADP,ATP CARRIER PROTEIN, LIVER ISOFORM T2 (ADP/ATP TRANSLOCASE 3)	163-190								
PAK79_HUMAN	A-KINASE ANCHOR PROTEIN 79 (AKAP 79) (CAMP-DEPENDENT PROTEIN KINASE	197-238	381-414							
PALFA_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4 1 2 13) A (MUSCLE)	36-63								
PALFB_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1 2 13) B (LIVER)	79-113								
PAMD1_HUMAN	AMP DEAMINASE 1 (EC 3.5.4.6) (MYOADENYLATE DEAMINASE) (AMP DEAMINASE	59-86								
PAMD3_HUMAN	AMP DEAMINASE 3 (EC 3.5.4.6) (AMP DEAMINASE ISOFORM E).	49-76								
PAMPN_HUMAN	AMINOPEPTIDASE N (EC 3.4.11.2) (MICROSOMAL AMINOPEPTIDASE) (GP150)	492-523	604-648	926-964						
PAMPR_HUMAN	AMPHIREGULIN PRECURSOR (AR).	213-247								
PAMRP_HUMAN	ALPHA-2-MACROGLOBULIN RECEPTOR-ASSOCIATED PROTEIN PRECURSOR	173-236	263-290							
PANFB_HUMAN	BRAIN NATRIURETIC PEPTIDE PRECURSOR	36-63								
PANK1_HUMAN	ANKYRIN R (ANKYRINS 2.1 AND 2.2) (ERYTHROCYTE ANKYRIN).	812-839	1004-1031	1617-1644						
PANKB_HUMAN	ANKYRIN, BRAIN VARIANT 1 (ANKYRIN B) (ANKYRIN, NONERYTHROID)	1544-1571								
PANKC_HUMAN	ANKYRIN, BRAIN VARIANT 2 (ANKYRIN B) (ANKYRIN, NONERYTHROID)	1811-1838								
PANPA_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR A PRECURSOR (ANP-A) (ANPRA) (GC-A)	553-580	825-852							
PANPB_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR B PRECURSOR (ANP-B) (ANPRB) (GC-B)	810-837								
PANT3_HUMAN	ANTITHROMBIN-III PRECURSOR (ATIII).	162-196								
PANX1_HUMAN	ANNEXIN II (LIPOCORTIN II) (CALPACTIN I HEAVY CHAIN) (CHROMOBINDIN 8)	40-67	306-333							
PANX3_HUMAN	ANNEXIN III (LIPOCORTIN III) (PLACENTAL ANTICOAGULANT PROTEIN III)	215-242								
PANX6_HUMAN	ANNEXIN VI (LIPOCORTIN VI) (P68) (P70) (PROTEIN III) (CHROMOBINDIN 20)	60-87	626-653							
PANX7_HUMAN	ANNEXIN, INTESTINE-SPECIFIC (ISA).	37-78	137-164							
PAOFA_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) A (EC 1.4 3.4) (MONOAMINE OXIDASE)	16-43	74-104							
PAOFB_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) B (EC 1.4 3 4) (MONOAMINE OXIDASE)	68-95								
PAPA1_HUMAN	APOLIPOPROTEIN A-I PRECURSOR (APO-AI).	57-84								
PAPB_HUMAN	APOLIPOPROTEIN B-100 PRECURSOR (APO B-100/APO B-48)	585-619	1073-1100	1353-1380	1524-1584	2074-2113	2132-2159	2181-2215	2240-2271	2360-2389
		2466-2507	2529-2559	2850-3000	3360-3390	3480-3570	3620-3654	4040-4074	4090-4120	4135-4167
		4274-4301	4397-4438	4465-4492	4499-4544					

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PAPC2_HUMAN	APOLIPOPROTEIN C-II PRECURSOR (APO-CII)	36-63								
PAPC_HUMAN	ADENOMATOUS POLYPOSIS COLI PROTEIN (APC PROTEIN).	145-172	617-651	834-861	1795-1822	2172-2212	2572-2609			
PAPE_HUMAN	APOLIPOPROTEIN E PRECURSOR (APO-E)	48-81	247-274							
PAPOA_HUMAN	APOLIPOPROTEIN(A) PRECURSOR (EC 3.4.21.-) (APO(A)) (LP(A))	4448-4475								
PAQP1_HUMAN	AQUAPORIN-CHIP (WATER CHANNEL PROTEIN FOR RED BLOOD CELLS AND KIDNEY	39-73								
PARK1_HUMAN	BETA-ADRENERGIC RECEPTOR KINASE 1 (EC 2.7.1.126) (BETA-ARK-1)	523-553								
PARLY_HUMAN	ARGININOSUCCINATE LYASE (EC 4.3.2.1) (ARGINOSUCCINASE).	69-103								
PARNT_HUMAN	ARYL HYDROCARBON RECEPTOR NUCLEAR TRANSLOCATOR (ARNT PROTEIN) (DIO	223-250								
PARRC_HUMAN	BETA-ARRESTIN 2.	215-242	305-332							
PARRS_HUMAN	ARRESTIN (RETINAL S-ANTIGEN) (48 KD PROTEIN) (S-AG).	299-352								
PARY1_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, MONOMORPHIC (EC 2.3.1.5) (MNAT)	7-34								
PARY2_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, POLYMORPHIC (EC 2.3.1.5) (PNAT)	7-34								
PASNS_HUMAN	ASPARAGINE SYNTHETASE (GLUTAMINE-HYDROLYZING) (EC 6.3.5.4) (TS11 CELL	311-338	347-374							
PATCD_HUMAN	CALCIUM-TRANSPORTING ATPASE SARCOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190								
PATCE_HUMAN	CALCIUM-TRANSPORTING ATPASE ENDOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190								
PATF1_HUMAN	TRANSCRIPTION FACTOR ATF-1 (FRAGMENT)	203-230								
PATF3_HUMAN	TRANSCRIPTION FACTOR ATF-3 (FRAGMENT)	155-183								
PATF5_HUMAN	TRANSCRIPTION FACTOR ATF-5 (FRAGMENT)	30-61								
PATF6_HUMAN	TRANSCRIPTION FACTOR ATF-6 (FRAGMENT).	54-68								
PATFA_HUMAN	TRANSCRIPTION FACTOR ATF-A AND ATF-A-DELTA	351-394								
PATPF_HUMAN	ATP SYNTHASE B CHAIN, MITOCHONDRIAL PRECURSOR (EC 3.6.1.34).	129-163								
PB232_HUMAN	NUCLEOLAR PHOSPHOPROTEIN B23 (NUCLEOPHOSMIN) (NUMATRIN).	114-141								
PB2AR_HUMAN	BETA-2-ADRENERGIC RECEPTOR.	292-319	345-372							
PB3A2_HUMAN	ANION EXCHANGE PROTEIN 2 (NON-ERYTHROID BAND 3-LIKE PROTEIN) (BND3L).	1081-1111								
PB94_HUMAN	B94 PROTEIN.	115-142	525-562	609-636						
PBAN7_HUMAN	ERYTHROCYTE BAND 7 INTEGRAL MEMBRANE PROTEIN.	106-140								
PBASO_HUMAN	BASONUCLIN.	120-147	310-337	773-807						
PBC2B_HUMAN	TRANSFORMING PROTEIN BCL-2-BETA	178-205								
PBCGF_HUMAN	B-CELL GROWTH FACTOR PRECURSOR (BCGF-12 KD).	33-63								
PBCR_HUMAN	BREAKPOINT CLUSTER REGION PROTEIN.	784-825								
PBGLR_HUMAN	BETA-GLUCURONIDASE PRECURSOR (EC 3.2.1.31).	246-280	504-531							
PBMP2_HUMAN	BONE MORPHOGENETIC PROTEIN 2 PRECURSOR (BMP-2) (BMP-2A)	216-250								
PBMP5_HUMAN	BONE MORPHOGENETIC PROTEIN 5 PRECURSOR (BMP-5).	202-229								
PBMP6_HUMAN	BONE MORPHOGENETIC PROTEIN 6 PRECURSOR (BMP-6).	274-301								
PBMP7_HUMAN	BONE MORPHOGENETIC PROTEIN 7 PRECURSOR (BMP-7) (OSTEOGENIC PROTEIN 1)	192-219								
PBN51_HUMAN	BN51 PROTEIN.	284-311								
PBPI_HUMAN	BACTERICIDAL PERMEABILITY INCREASING PROTEIN PRECURSOR (BPI) (CAP 57).	168-195								
PBRS3_HUMAN	BOMBESIN RECEPTOR SUBTYPE-3 (BRS-3)	10-37								
PBTF2_HUMAN	BASIC TRANSCRIPTION FACTOR 62 KD SUBUNIT (P62).	128-162	353-385							
PBTG1_HUMAN	BTG1 PROTEIN (B-CELL TRANSLOCATION GENE 1 PROTEIN).	26-53								
PC1TC_HUMAN	C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFO	330-363								
PC2TA_HUMAN	MHC CLASS II TRANSACTIVATOR CIITA.	921-948								
PCA19_HUMAN	COLLAGEN ALPHA 1(IX) CHAIN PRECURSOR.	120-150								
PCA1B_HUMAN	COLLAGEN ALPHA 1(XI) CHAIN PRECURSOR.	341-368								
PCABV_HUMAN	CALBINDIN (VITAMIN D-DEPENDENT CALCIUM-BINDING PROTEIN (CABP), AVIAN-	27-54								
PCAD5_HUMAN	CADHERIN 5 PRECURSOR (7B4 ANTIGEN)	723-750								
PCADE_HUMAN	EPITHELIAL-CADHERIN PRECURSOR (E-CADHERIN) (UVOMORULIN) (CAM 120/80)	838-865								
PCADN_HUMAN	NEURAL-CADHERIN PRECURSOR (N-CADHERIN).	95-122	323-350							
PCADP_HUMAN	PLACENTAL-CADHERIN PRECURSOR (P-CADHERIN).	384-411	580-607							
PCAGA_HUMAN	CALGRANULIN A (MIGRATION INHIBITORY FACTOR-RELATED PROTEIN 8) (MRP-8)	2-29								
PCALR_HUMAN	CALCITONIN RECEPTOR PRECURSOR (CT-R).	140-167								
PCAMA_HUMA	CARTILAGE MATRIX PROTEIN PRECURSOR.	297-324	467-494							
PCAP1_HUMAN	CALPAIN 1, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	561-588								
PCAP2_HUMAN	CALPAIN 2, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	257-284	502-529							
PCAP3_HUMAN	CALPAIN P94, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-	674-701								
PCAPL_HUMAN	PLACENTAL CALCIUM-BINDING PROTEIN.	13-40								
PCAP_HUMAN	ADENYLYL CYCLASE-ASSOCIATED PROTEIN (CAP)	111-138	163-197	321-355						

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCART_HUMAN	CALRETININ (29 KD CALBINDIN)	217-244								
PCASB_HUMAN	BETA CASEIN PRECURSOR.	14-48								
PCATA_HUMAN	CATALASE (EC 1.11.1.6).	422-456								
PCATD_HUMAN	CATHEPSIN D PRECURSOR (EC 3 4 23 5)	253-282								
PCATH_HUMAN	CATHEPSIN H PRECURSOR (EC 3 4.22 16)	41-68								
PCATL_HUMAN	CATHEPSIN L PRECURSOR (EC 3.4 22 15) (MAJOR EXCRETED PROTEIN) (MEP)	278-305								
PCATS_HUMAN	CATHEPSIN S PRECURSOR (EC 3.4.22 27).	30-57	142-169							
PCBFB_HUMAN	CCAAT-BINDING TRANSCRIPTION FACTOR SUBUNIT B (CBF-B) (NF-Y PROTEIN	24-58	138-165							
PCBG_HUMAN	CORTICOSTEROID-BINDING GLOBULIN PRECURSOR (CBG) (TRANSCORTIN)	88-122								
PCBPB_HUMAN	CARBOXYPEPTIDASE B PRECURSOR (EC 3 4.17 2) (PANCREAS-SPECIFIC PROTEIN)	69-129	278-305	319-346						
PCBPH_HUMAN	CARBOXYPEPTIDASE H PRECURSOR (EC 3 4.17 10) (CARBOXYPEPTIDASE E) (CPE)	355-382								
PCC21_HUMAN	CDC21 HOMOLOG (P1-CDC21) (FRAGMENT).	35-62								
PCC27_HUMAN	PROTEIN CDC27HS.	209-240								
PCCG1_HUMAN	TRANSCRIPTION INITIATION FACTOR TFIID 250 KD SUBUNIT (TBP-ASSOCIATED	1298-1342								
PCD14_HUMAN	MONOCYTE DIFFERENTIATION ANTIGEN CD14 PRECURSOR (MYELOID CELL-SPECIF	142-169								
PCD1A_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL.	32-63	281-308							
PCD1E_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1E PRECURSOR (CD1E ANTIGEN) (R2G1)	77-104								
PCD20_HUMAN	B-LYMPHOCYTE ANTIGEN CD20 (B-LYMPHOCYTE SURFACE ANTIGEN B1) (LEU-16)	226-255								
PCD2R_HUMAN	CD20 RECEPTOR PRECURSOR.	226-255								
PCD2_HUMAN	T-CELL SURFACE ANTIGEN CD2 PRECURSOR (T-CELL SURFACE ANTIGEN	88-119								
PCD34_HUMAN	HEMOPOIETIC PROGENITOR CELL ANTIGEN CD34 PRECURSOR.	74-108								
PCD37_HUMAN	LEUKOCYTE ANTIGEN CD37.	101-128								
PCD3G_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD3 GAMMA CHAIN PRECURSOR (T-CELL RECEPT	7-34								
PCD3L_HUMAN	CD30 LIGAND (CD30-L).	96-130	183-217							
PCD4X_HUMAN	CD44 ANTIGEN, EPITHELIAL FORM PRECURSOR (CD44E) (PHAGOCYTIC	328-355								
PCD4_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD4 PRECURSOR (T-CELL SURFACE ANTIGEN	44-71	240-267							
PCD53_HUMAN	LEUKOCYTE SURFACE ANTIGEN CD53.	87-114								
PCD72_HUMAN	B-CELL DIFFERENTIATION ANTIGEN CD72 (LYB-2)	118-177								
PCDK3_HUMAN	CELL DIVISION PROTEIN KINASE 3 (EC 2.7.1.-).	5-32								
PCDK5_HUMAN	CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1.-) (KINASE PSSALRE)	5-32								
PCEBB_HUMAN	CCAAT/ENHANCER BINDING PROTEIN BETA (C/EBP BETA) (NUCLEAR FACTOR	296-330								
PCENB_HUMAN	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)	568-595								
PCENC_HUMAN	CENTROMERE PROTEIN C (CENP-C) (CENTROMERE AUTOANTIGEN C).	433-460								
PCENE_HUMAN	CENTROMERIC PROTEIN E (CENP-E PROTEIN)	372-399	493-520	553-607	715-752	767-825	850-884	903-947	963-995	1080-1107
		1122-1149	1179-1239	1250-1277	1340-1367	1440-1481	1486-1556	1646-1680	1684-1724	1808-1846
		1852-1883	1890-1917	1940-1988	2021-2048	2288-2318	2440-2478	2498-2563		
PCERU_HUMAN	CERULOPLASMIN PRECURSOR (EC 1.16.3 1) (FERROXIDASE).	913-940								
PCETP_HUMAN	CHOLESTERYL ESTER TRANSFER PROTEIN PRECURSOR.	71-108								
PCFTR_HUMAN	CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR)	158-189	802-829	895-922	1243-1270					
PCGCC_HUMAN	CGMP-GATED CATION CHANNEL PROTEIN (CYCLIC NUCLEOTIDE	216-243								
PCGL_HUMAN	CYSTATHIONINE GAMMA-LYASE (EC 4.4.1.1).	315-349								
PCHLR_HUMAN	CHLORDECONE REDUCTASE (EC 1.1.1.225) (CDR).	17-51								
PCHOL_HUMAN	CHOROIDERAEMIA-LIKE PROTEIN.	56-97	230-257	451-478						
PCHOR_HUMAN	CHOROIDERAEMIA PROTEIN (TCD PROTEIN).	112-139								
PCHA_HUMAN	SODIUM CHANNEL PROTEIN, CARDIAC AND SKELETAL MUSCLE ALPHA-SUBUNIT.	787-814	943-970							
PCLCA_HUMAN	CLATHRIN LIGHT CHAIN A (BRAIN AND LYMPHOCYTE LCA).	121-148								
PCLCB_HUMAN	CLATHRIN LIGHT CHAIN B (BRAIN AND LYMPHOCYTE LCB).	123-157								
PCLCY_HUMAN	CALCYCLIN (PROLACTIN RECEPTOR ASSOCIATED PROTEIN) (PRA) (GROWTH	9-50								
PCLUS_HUMAN	CLUSTERIN PRECURSOR (COMPLEMENT-ASSOCIATED PROTEIN SP-40,40)	36-98	323-350	367-394						
PCMGA_HUMA	CHROMOGRANIN A PRECURSOR (CGA) (CONTAINS: PANCREASTATIN AND WE-14)	93-120	430-457							
PCNTF_HUMAN	CILIARY NEUROTROPHIC FACTOR (CNTF).	66-93								
PCO02_HUMAN	TUMOR-ASSOCIATED ANTIGEN CO-029.	29-56	95-148							
PCO3_HUMAN	COMPLEMENT C3 PRECURSOR.	242-276	593-620	837-867						
PCO4_HUMAN	COMPLEMENT C4 PRECURSOR.	1292-1319								
PCO5_HUMAN	COMPLEMENT C5 PRECURSOR.	298-342	537-564	970-997	1270-1304					
PCO6_HUMAN	COMPLEMENT C6 PRECURSOR.	367-398								
PCO7_HUMAN	COMPLEMENT C7 PRECURSOR.	225-261								

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCOX1_HUMAN	CYTOCHROME C OXIDASE POLYPEPTIDE I (EC 1.9.3.1)	353-380								
PCP70_HUMAN	CYTOCHROME P450 VII (CHOLESTEROL 7-ALPHA-MONOOXYGENASE)	263-290	346-373							
PCPCH_HUMAN	CYTOCHROME P450 IIC17 (EC 1.14.14.1) (P450-254C) (FRAGMENT).	109-136								
PCPE1_HUMAN	CYTOCHROME P450 IIE1 (EC 1.14.14.1) (P450-J) (ETHANOL INDUCIBLE)	231-258								
PCPSM_HUMAN	CARBAMOYL-PHOSPHATE SYNTHASE (AMMONIA) MITOCHONDRIAL PRECURSOR	112-146	420-447							
PCPT2_HUMAN	MITOCHONDRIAL CARNITINE PALMITOYLTRANSFERASE II PRECURSOR	410-437								
PCPT7_HUMAN	CYTOCHROME P450 XVIIA1 (P450-C17) (EC 1.14.99.9) (STEROID 17-ALPHA-	226-257								
PCPV1_HUMAN	CYTOCHROME P450 XIXA1 (AROMATASE) (EC 1.14.14.1) (ESTROGEN	234-271								
PCR3_HUMAN	COMPLEMENT RECEPTOR TYPE 3 PRECURSOR (CR3) (COMPLEMENT C3D RECEPTOR)	986-1013								
PCRCM_HUMAN	COLORECTAL MUTANT CANCER PROTEIN (MCC PROTEIN).	68-126	379-420	633-678	724-754	763-790				
PCREB_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEINS A AND B (CREB-A AND CREB-B)	94-125								
PCREP_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEIN CRE-BP1.	380-414								
PCRP_HUMAN	C-REACTIVE PROTEIN PRECURSOR.	60-87	150-177							
PCS1_HUMAN	CLEAVAGE SIGNAL-1 PROTEIN (CS-1)	203-233								
PCSF1_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR-1 PRECURSOR (CSF-1) (MCSF)	143-170								
PCST2_HUMAN	CLEAVAGE STIMULATION FACTOR, 50 KD SUBUNIT (CSTF 50 KD SUBUNIT) (CF-I	6-33								
PCTNA_HUMAN	ALPHA-CATENIN (CADHERIN-ASSOCIATED PROTEIN)	681-718								
PCTNR_HUMAN	ALPHA-CATENIN RELATED PROTEIN (CATENIN ALPHA-2)	680-717								
PCX26_HUMAN	GAP JUNCTION BETA-2 PROTEIN (CONNEXIN 26) (CX26)	108-139								
PCX32_HUMAN	GAP JUNCTION BETA-1 PROTEIN (CONNEXIN 32) (CX32) (GAP JUNCTION 28 KD	117-144								
PCX37_HUMAN	GAP JUNCTION ALPHA-4 PROTEIN (CONNEXIN 37) (CX37)	88-115								
PCYB5_HUMAN	CYTOCHROME B5.	3-42								
PCYG1_HUMAN	GUANYLATE CYCLASE SOLUBLE, BETA-1 CHAIN (EC 4.6.1.2) (70 KD CHAIN)	80-107	126-153	352-396						
PCYG4_HUMAN	GUANYLATE CYCLASE SOLUBLE, ALPHA-2 CHAIN (EC 4.6.1.2)	106-133								
PCYGR_HUMAN	RETINAL GUANYLYL CYCLASE PRECURSOR (EC 4.6.1.2)	824-851								
PCYRG_HUMAN	CYTOKINE RECEPTOR COMMON GAMMA CHAIN PRECURSOR (GAMMA-C)	293-320								
PCYTA_HUMAN	CYSTATIN A (STEFIN A) (CYSTATIN AS)	27-58								
PDBL_HUMAN	PROTO-ONCOGENE DBL PRECURSOR (CONTAINS MCF2)	233-283	485-524	766-793	801-845					
PDESM_HUMAN	DESMIN	153-180	272-312							
PDESP_HUMAN	DESMOPLAKIN I AND II (DPI AND DPII) (FRAGMENT)	31-79	113-143	217-244	269-317	382-434	437-467	528-558	563-598	630-674
		697-734	738-789	1456-1493	1508-1535					
PDHAP_HUMAN	ALDEHYDE DEHYDROGENASE, DIMERIC NADP-PREFERRING (EC 1.2.1.5)	31-58								
PDMD_HUMAN	DYSTROPHIN	86-116	338-365	484-511	753-780	976-1003	1012-1039	1201-1228	1364-1394	1615-1674
		1838-1865	2158-2185	2313-2343	2752-2779	2786-2830	2912-2958	3014-3041	3499-3533	
PDNJ1_HUMAN	DNAJ PROTEIN HOMOLOG.	45-76								
PDNL1_HUMAN	DNA LIGASE I (EC 6.5.1.1) (POLYDEOXYRIBONUCLEOTIDE SYNTHASE (ATP))	130-157	355-392	732-759						
PDPOA_HUMAN	DNA POLYMERASE ALPHA (EC 2.7.7.7)	25-74	1009-1057	1100-1127						
PDPOD_HUMAN	DNA POLYMERASE DELTA CATALYTIC CHAIN (EC 2.7.7.7)	729-756								
PDPP4_HUMAN	DIPEPTIDYL PEPTIDASE IV (EC 3.4.14.5) (DPP IV) (T-CELL ACTIVATION	29-77	114-148							
PDRN1_HUMAN	DEOXYRIBONUCLEASE I PRECURSOR (EC 3.1.21.1) (DNASE I).	44-71								
PDSC3_HUMAN	DESMOCOLLIN 3A/3B PRECURSOR (DESMOSOMAL GLYCOPROTEIN II AND III)	80-107	355-398							
PDSG1_HUMAN	DESMOGLEIN 1 PRECURSOR (DESMOSOMAL GLYCOPROTEIN 1) (DG1).	15-42	271-298	497-531						
PDSG3_HUMAN	DESMOGLEIN 3 PRECURSOR (130 KD PEMPHIGUS VULGARIS ANTIGEN) (PVA)	211-248	325-352							
PDUO_HUMAN	DIVERGENT UPSTREAM PROTEIN (DUP)	584-618								
PEAR1_HUMAN	V-ERBA RELATED PROTEIN EAR-1.	523-550								
PEBI2_HUMAN	EBV-INDUCED G PROTEIN-COUPLED RECEPTOR 2 (EBI2)	44-78								
PEF1B_HUMAN	ELONGATION FACTOR 1-BETA (EF-1-BETA).	105-132								
PEF1D_HUMAN	ELONGATION FACTOR 1-DELTA (EF-1-DELTA).	84-118								
PEGFR_HUMAN	EPIDERMAL GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112)	64-91	440-467							
PEGF_HUMAN	EPIDERMAL GROWTH FACTOR PRECURSOR, KIDNEY (EGF) (UROGASTRONE)	47-74								
PELF1_HUMAN	ETS-RELATED TRANSCRIPTION FACTOR ELF-1.	551-588								
PENPL_HUMAN	ENDOPLASMIN PRECURSOR (94 KD GLUCOSE-REGULATED PROTEIN) (GRP94) (GP96	47-74	246-273							
PENV1_HUMAN	RETROVIRUS-RELATED ENV POLYPROTEIN.	382-420								
PEPC_HUMAN	IG EPSILON CHAIN C REGION.	161-188								
PEPMO_HUMAN	EPIMORPHIN.	35-62	67-94	249-283						
PER72_HUMAN	PROTEIN DISULFIDE ISOMERASE-RELATED PROTEIN PRECURSOR (ERP72)	58-85	142-169	458-485						
PERC1_HUMAN	DNA EXCISION REPAIR PROTEIN ERCC-1.	240-270								

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PERC6_HUMAN	EXCISION REPAIR PROTEIN ERCC-6	160-209	939-973							
PESTR_HUMAN	ESTROGEN RECEPTOR (ER)	451-488								
PET2_HUMAN	ENDOTHELIN-2 PRECURSOR (ET-2)	133-160								
PET3_HUMAN	ENDOTHELIN-3 PRECURSOR (ET-3)	182-209								
PEV2A_HUMAN	EVI2A PROTEIN PRECURSOR.	29-56								
PEZRI_HUMAN	EZRIN (P81) (CYTOVILLIN) (VILLIN-2).	119-146	351-392	402-429	512-539					
PFA5_HUMAN	COAGULATION FACTOR V PRECURSOR.	2103-2137								
PFA8_HUMAN	COAGULATION FACTOR VIII PRECURSOR (PROCOAGULANT COMPONENT).	871-908	1007-1034	1194-1230						
PFA9_HUMAN	COAGULATION FACTOR IX PRECURSOR (EC 3.4.21.22) (CHRISTMAS FACTOR)	271-298								
PFABI_HUMAN	FATTY ACID-BINDING PROTEIN, INTESTINAL.	98-125								
PFASA_HUMAN	APOPTOSIS-MEDIATING SURFACE ANTIGEN FAS PRECURSOR (APO-1 ANTIGEN)	23-50	249-301	306-333						
PFCE2_HUMAN	LOW AFFINITY IMMUNOGLOBULIN EPSILON FC RECEPTOR (LYMPHOCYTE IGE	81-115								
PFCEA_HUMAN	HIGH AFFINITY IMMUNOGLOBULIN EPSILON RECEPTOR ALPHA-SUBUNIT (FCERI)	140-174								
PFGR2_HUMAN	FIBROBLAST GROWTH FACTOR RECEPTOR 2 PRECURSOR (EC 2.7.1.112).	310-337								
PFIBA_HUMAN	FIBRINOGEN ALPHA CHAIN PRECURSOR.	131-165	427-457							
PFIBB_HUMAN	FIBRINOGEN BETA CHAIN PRECURSOR.	149-186								
PFIBG_HUMAN	FIBRINOGEN GAMMA-A CHAIN PRECURSOR.	59-93	125-160							
PFIBH_HUMAN	FIBRINOGEN GAMMA-B CHAIN (FIBRINOGEN GAMMA').	59-93	125-160							
PFINC_HUMAN	FIBRONECTIN PRECURSOR.	2168-2199								
PFLI1_HUMAN	FLI-1 ONCOGENE (ERGB TRANSCRIPTION FACTOR)	172-209								
PFMO3_HUMAN	DIMETHYLANILINE MONOOXYGENASE (N-OXIDE FORMING) 3 (EC 1.14.13.8)	184-218	256-283	301-328						
PFOS_HUMAN	P55-C-FOS PROTO-ONCOGENE PROTEIN.	162-193								
PFRA1_HUMAN	FOS-RELATED ANTIGEN 1.	133-168								
PFRA2_HUMAN	FOS-RELATED ANTIGEN 2.	149-180								
PFRIH_HUMAN	FERRITIN HEAVY CHAIN.	7-34								
PFRIL_HUMAN	FERRITIN LIGHT CHAIN.	3-33								
PFSHR_HUMAN	FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R)	364-395								
PFUCO_HUMAN	TISSUE ALPHA-L-FUCOSIDASE PRECURSOR (EC 3.2.1.51) (ALPHA-L-FUCOSIDASE	308-335								
PFUMH_HUMAN	FUMARATE HYDRATASE, MITOCHONDRIAL (EC 4.2.1.2) (FUMARASE)	424-451								
PG052_HUMAN	PUTATIVE LYMPHOCYTE G0/G1 SWITCH PROTEIN	56-83								
PG19P_HUMAN	PROTEIN KINASE C SUBSTRATE, 80 KD PROTEIN, HEAVY CHAIN (PKCSH)	146-173								
PG6PI_HUMAN	GLUCOSE-6-PHOSPHATE ISOMERASE (GPI) (EC 5.3.1.9) (PHOSPHOGLUCOSE	16-50								
PG732_HUMAN	MAJOR GASTROINTESTINAL TUMOR-ASSOCIATED PROTEIN GA733-2 PRECURSOR	181-215								
PGA12_HUMAN	GALACTOKINASE 2 (EC 2.7.1.6).	254-281								
PGAA1_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-1 SUBUNIT PRECURSOR (GABA(A)	210-237								
PGAA3_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-3 SUBUNIT PRECURSOR (GABA(A)	211-255								
PGASR_HUMAN	GASTRIN/CHOLECYSTOKININ TYPE B RECEPTOR (CCK-B RECEPTOR).	75-105								
PGB01_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 1	22-49								
PGB02_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 2.	22-49								
PGBAK_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(K), ALPHA SUBUNIT (G(I) ALPHA-3)	22-49								
PGBAS_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE	7-34								
PGBAY_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(Y), ALPHA SUBUNIT (ALPHA-11)	95-122								
PGBB3_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(I)/G(S)/G(T) BETA SUBUNIT 3	65-92								
PGBLP_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUBUNIT-LIKE PROTEIN 12 3.	110-137	255-282	289-316						
PGBP2_HUMAN	INTERFERON-INDUCED GUANYLATE-BINDING PROTEIN 2 (GUANINE NUCLEOTIDE-	454-488								
PGBT2_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(T), ALPHA-2 SUBUNIT (TRANSDUCIN	22-49								
PGCF_HUMAN	GC-RICH SEQUENCE DNA-BINDING FACTOR (GCF) (TRANSCRIPTION FACTOR 9)	200-227	293-320	367-394	396-423	647-674				
PGCH1_HUMAN	GTP CYCLOHYDROLASE I (EC 3.5.4.16)	165-192								
PGCRA_HUMAN	GLUCOCORTICOID RECEPTOR, ALPHA (GR)	167-194								
PGCRB_HUMAN	GLUCOCORTICOID RECEPTOR, BETA (GR)	167-194								
PGCSP_HUMAN	GLYCINE DEHYDROGENASE (DECARBOXYLATING) PRECURSOR (EC 1.4.4.2)	460-487								
PGDN_HUMAN	GLIA DERIVED NEXIN (GDN) (PROTEASE NEXIN I).	83-110								
PGELS_HUMAN	GELSOLIN PRECURSOR, PLASMA (ACTIN-DEPOLYMERIZING FACTOR) (ADF)	701-728								
PGFAP_HUMAN	GLIAL FIBRILLARY ACIDIC PROTEIN, ASTROCYTE.	189-216	349-376	384-411						
PGL6S_HUMAN	N-ACETYLGLUCOSAMINE-6-SULFATASE PRECURSOR (EC 3.1.6.14) (G6S)	170-221								
PGLPK_HUMAN	GLYCEROL KINASE (EC 2.7.1.30) (ATP:GLYCEROL 3-PHOSPHOTRANSFERASE)	78-112	251-278							
PGLY1_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, CYTOSOLIC (EC 2.1.2.1) (SERINE	32-59	344-371							

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PGLY2_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, MITOCHONDRIAL (EC 2.1.2.1) (SERINE	417-444								
PGR78_HUMAN	78 KD GLUCOSE REGULATED PROTEIN PRECURSOR (GRP 78) (IMMUNOGLOBULIN	564-591	598-625							
PGRA2_HUMAN	GLYCINE RECEPTOR ALPHA-2 CHAIN PRECURSOR.	142-169	341-368							
PGRAV_HUMAN	GRAVIN (FRAGMENT).	9-43	61-88							
PGRFR_HUMAN	GROWTH HORMONE-RELEASING HORMONE RECEPTOR PRECURSOR (GHRH RECEPT	128-155								
PGTH2_HUMAN	GLUTATHIONE S-TRANSFERASE HA SUBUNIT 2 (EC 2.5.1.18) (GTH2) (CLASS-	64-91								
PGTPA_HUMAN	GTPASE-ACTIVATING PROTEIN (GAP) (RAS P21 PROTEIN ACTIVATOR).	474-501	1012-1047							
PGTR1_HUMAN	GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN.	274-301								
PGTR3_HUMAN	GLUCOSE TRANSPORTER TYPE 3, BRAIN.	272-299								
PGTR4_HUMAN	GLUCOSE TRANSPORTER TYPE 4, INSULIN-RESPONSIVE.	290-317								
PH10_HUMAN	HISTONE H1°.	44-89								
PH1A_HUMAN	HISTONE H1A (H1.1).	73-104								
PH1B_HUMAN	HISTONE H1B (H1.4).	70-101								
PH1C_HUMAN	HISTONE H1C (H1.3).	71-102								
PH1D_HUMAN	HISTONE H1D (H1.2).	70-101								
PH1T_HUMAN	HISTONE H1T.	74-105								
PH2B0_HUMAN	HISTONE H2B 1.	20-47								
PH2B2_HUMAN	HISTONE H2B.2.	20-47								
PH2B_HUMAN	HISTONE H2B (H2B.1 A).	20-47								
PHA2S_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DQ(5) ALPHA CHAIN PRECURSOR	142-169								
PHB2K_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR-W53 BETA CHAIN PRECURSOR	56-83								
PHB2P_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(W4) BETA CHAIN PRECURSOR.	50-77								
PHB2Q_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(W2) BETA CHAIN PRECURSOR	50-77								
PHB2S_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, SB BETA CHAIN (FRAGMENT)	16-43								
PHBG1_HUMAN	HEPARIN-BINDING GROWTH FACTOR PRECURSOR 1 (HBGF-1) (ACIDIC FIBROBLAST	102-129								
PHBG3_HUMAN	INT-2 PROTO-ONCOGENE PROTEIN PRECURSOR (HBGF-3).	61-91								
PHBG6_HUMAN	FIBROBLAST GROWTH FACTOR-6 PRECURSOR (FGF-6) (HBGF-6) (HST-2)	41-75	159-186							
PHBI_HUMAN	P59 PROTEIN (HSP BINDING IMMUNOPHILIN) (HBI) (POSSIBLE PEPTIDYL-PROLYL	264-312								
PHEM4_HUMAN	UROPORPHYRINOGEN-III SYNTHASE (EC 4.2.1.75) (UROPORPHYRINOGEN-III	74-118								
PHEP2_HUMAN	HEPARIN COFACTOR II PRECURSOR (HC-II) (PROTEASE INHIBITOR LEUSERPIN 2)	169-196								
PHEPS_HUMAN	SERINE PROTEASE HEPSIN (EC 3.4.21.-).	22-49								
PHEXA_HUMAN	BETA-HEXOSAMINIDASE ALPHA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-	356-383								
PHEXB_HUMAN	BETA-HEXOSAMINIDASE BETA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-BETA-	388-415								
PHMX1_HUMAN	HOMEOBOX PROTEIN MSX-1 (HOX-7).	178-212								
PHNFA_HUMAN	HEPATOCYTE NUCLEAR FACTOR 1-ALPHA (HNF-1A) (LIVER SPECIFIC	2-29								
PHO1_HUMAN	HEME OXYGENASE 1 (EC 1.14.99.3) (HO-1).	197-224								
PHPPD_HUMAN	4-HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD).	306-333								
PHRX_HUMAN	ZINC FINGER PROTEIN HRX.	521-548	914-974	1637-1666	2215-2286	2289-2316	3317-3344	3448-3475		
PHS1_HUMAN	HEMATOPOIETIC LINEAGE CELL SPECIFIC PROTEIN.	43-70								
PHS9A_HUMAN	HEAT SHOCK PROTEIN HSP 90-ALPHA (HSP 86).	443-470	640-674							
PHSER_HUMAN	HEAT-STABLE ENTEROTOXIN RECEPTOR PRECURSOR (GC-C) (INTESTINAL	511-545								
PHSF1_HUMAN	HEAT SHOCK FACTOR PROTEIN 1 (HSF 1) (HEAT SHOCK TRANSCRIPTION FACTOR	113-140	168-209							
PHSF2_HUMAN	HEAT SHOCK FACTOR PROTEIN 2 (HSF 2) (HEAT SHOCK TRANSCRIPTION FACTOR	117-198								
PHV2I_HUMAN	IG HEAVY CHAIN PRECURSOR V-II REGION (ARH-77).	67-108								
PHV3T_HUMAN	IG HEAVY CHAIN V-III REGION (GAL).	47-74								
PHX11_HUMAN	HOMEOBOX PROTEIN HOX-11 (TCL-3 PROTO-ONCOGENE).	262-289								
PHXB7_HUMAN	HOMEOBOX PROTEIN HOX-B7 (HOX-2C) (HHO.C1).	135-162								
PIAPP_HUMAN	ISLET AMYLOID POLYPEPTIDE	53-80								
PIBP3_HUMAN	INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3 PRECURSOR (IGFBP-3)	183-210								
PIC1_HUMAN	PLASMA PROTEASE C1 INHIBITOR PRECURSOR (C1 INH).	251-278								
PICA2_HUMAN	INTERCELLULAR ADHESION MOLECULE-2 PRECURSOR (ICAM-2).	57-84								
PIDE_HUMAN	INSULIN-DEGRADING ENZYME (EC 3.4.99.45) (INSULINASE) (INSULIN	474-504	907-941							
PIF41_HUMAN	EUKARYOTIC INITIATION FACTOR 4A-I (EIF-4A-I)	232-259	322-349							
PIF4B_HUMAN	INTRINSIC FACTOR PRECURSOR (IF) (GASTRIC INTRINSIC FACTOR).	149-176	406-433							
PIF_HUMAN	INHIBIN BETA A CHAIN PRECURSOR (ACTIVIN BETA-A CHAIN) (ERYTHROID	308-349								
PILBA_HUMAN	INTERLEUKIN-1 ALPHA PRECURSOR (IL-1 ALPHA) (HEMATOPOIETIN-1)	80-107	183-210							
PIL1A_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	76-110	172-199							

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PILIR_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	437-467								
PILIS_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE II PRECURSOR (IL-1R2).	159-186								
PILSR_HUMAN	INTERLEUKIN-3 RECEPTOR ALPHA CHAIN PRECURSOR (IL-3R-ALPHA).	87-114								
PIL6_HUMAN	INTERLEUKIN-6 PRECURSOR (IL-6) (B-CELL STIMULATORY FACTOR 2) (BSF-2)	112-139								
PINAJ_HUMAN	INTERFERON ALPHA-J PRECURSOR.	94-121								
PINAR_HUMAN	INTERFERON/ALPHA RECEPTOR PRECURSOR (IFN-ALPHA-REC).	90-117	164-191	300-327	508-535					
PINB_HUMAN	INTERFERON BETA PRECURSOR (FIBROBLAST).	88-129								
PINI1_HUMAN	INTERFERON-INDUCED 17 KD PROTEIN (CONTAINS: INTERFERON-INDUCED 15 KD	83-121								
PINI6_HUMAN	INTERFERON-INDUCED 56 KD PROTEIN (IFI-56K).	51-78	216-245	393-430						
PINSR_HUMAN	INSULIN RECEPTOR PRECURSOR (EC 2.7.1.112) (IR).	592-619								
PINVO_HUMAN	INVOLUCRIN.	119-146	229-273	326-363	386-450					
PIP3K_HUMAN	1D-MYO-INOSITOL-TRISPHOSPHATE 3-KINASE A (EC 2.7.1.127) (INOSITOL	121-162								
PIPSP_HUMAN	PLASMA SERINE PROTEASE (PROTEIN C) INHIBITOR PRECURSOR (PCI)	90-117	206-233							
PIRBP_HUMAN	INTERPHOTORECEPTOR RETINOID-BINDING PROTEIN PRECURSOR (IRBP)	670-697								
PIRF2_HUMAN	INTERFERON REGULATORY FACTOR 2 (IRF-2).	157-193								
PITSP_HUMAN	75 KD INOSITOL-1,4,5-TRISPHOSPHATE 5-PHOSPHATASE PRECURSOR	235-262								
PITA2_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IA PRECURSOR (GPIA) (COLLAGEN RECEPTO	579-606	900-927							
PITA5_HUMAN	FIBRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-F)	250-284	657-695	765-792						
PITA6_HUMAN	INTEGRIN ALPHA-6 PRECURSOR (VLA-6) (INTEGRIN ALPHA-E) (CD49F).	884-911	944-974							
PITAL_HUMAN	LEUKOCYTE ADHESION GLYCOPROTEIN LFA-1 ALPHA CHAIN PRECURSOR (LEUKOC	256-283	310-341	795-822						
PITAM_HUMAN	CELL SURFACE GLYCOPROTEIN MAC-1 ALPHA SUBUNIT PRECURSOR (CR-3 ALPHA	1044-1078								
PITAV_HUMAN	VITRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-V)	230-264								
PITB1_HUMAN	FIBRONECTIN RECEPTOR BETA SUBUNIT PRECURSOR (INTEGRIN BETA-1) (CD29)	218-245	354-399							
PITB2_HUMAN	CELL SURFACE ADHESION GLYCOPROTEINS LFA-1, CR3 AND P150,95, BETA-	339-366	705-732							
PITB3_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IIIA PRECURSOR (GPIIIA) (INTEGRIN BETA-	324-351								
PITB4_HUMAN	INTEGRIN BETA-4 SUBUNIT PRECURSOR (GP150).	342-369								
PITB5_HUMAN	INTEGRIN BETA-5 SUBUNIT PRECURSOR.	724-751								
PITB6_HUMAN	INTEGRIN BETA-6 SUBUNIT PRECURSOR.	311-338	352-393							
PITB8_HUMAN	INTEGRIN BETA-8 SUBUNIT PRECURSOR.	362-399	696-737							
PITI2_HUMAN	INTER-ALPHA-TRYPSIN INHIBITOR COMPLEX COMPONENT II PRECURSOR.	134-161	425-452	772-818						
PK1CJ_HUMAN	KERATIN, TYPE I CYTOSKELETAL 10 (CYTOKERATIN 10) (K10).	154-187	196-227	337-399	428-462					
PK1CM_HUMAN	KERATIN, TYPE I CYTOSKELETAL 13 (CYTOKERATIN 13) (K13).	112-142								
PK1CN_HUMAN	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14).	122-152	306-335	393-424						
PK1CO_HUMAN	KERATIN, TYPE I CYTOSKELETAL 15 (CYTOKERATIN 15) (K15).	113-143								
PK1CP_HUMAN	KERATIN, TYPE I CYTOSKELETAL 16 (CYTOKERATIN 16) (K16).	308-339								
PK1CQ_HUMAN	KERATIN, TYPE I CYTOSKELETAL 17 (CYTOKERATIN 17) (K17).	122-152	302-346	393-431						
PK1CR_HUMAN	KERATIN, TYPE I CYTOSKELETAL 18 (CYTOKERATIN 18) (K18).	87-114	251-298	337-385						
PK1CS_HUMAN	KERATIN, TYPE I CYTOSKELETAL 19 (CYTOKERATIN 19) (K19).	88-118	317-362	370-397						
PK2C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 1 (CYTOKERATIN 1) (K1) (CYTOSKELETAL 67	196-226	346-384	390-467						
PK2C2_HUMAN	KERATIN, TYPE II CYTOSKELETAL 65 KD.	215-248	364-405	461-488						
PK2C4_HUMAN	KERATIN, TYPE II CYTOSKELETAL 4 (CYTOKERATIN 4) (K4) (FRAGMENT).	42-73	126-153	189-248						
PK2C5_HUMAN	KERATIN, TYPE II CYTOSKELETAL 5 (CYTOKERATIN 5) (K5) (58 KD	185-246	332-373							
PK2C6_HUMAN	KERATIN, TYPE II CYTOSKELETAL 6 (CYTOKERATIN 6) (K6B KERATIN).	178-239	325-366	422-449						
PK2C8_HUMAN	KERATIN, TYPE II CYTOSKELETAL 8 (CYTOKERATIN 8) (K8).	140-167								
PK2CA_HUMAN	KERATIN, TYPE II CYTOSKELETAL 56 KD (K6A KERATIN) (FRAGMENT).	7-34	120-161	217-244						
PK6PF_HUMAN	6-PHOSPHOFRUCTOKINASE, MUSCLE TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	140-167								
PK6PL_HUMAN	6-PHOSPHOFRUCTOKINASE, LIVER TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	49-80	128-159							
PKABL_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE ABL (EC 2.7.1.112) (P150)	498-525								
PKAC_HUMAN	IG KAPPA CHAIN C REGION.	37-85								
PKALM_HUMAN	KALLMANN SYNDROME PROTEIN PRECURSOR (ADHESION MOLECULE-LIKE X-LINK	380-414								
PKAP0_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-ALPHA REGULATORY CHAIN	179-206								
PKAP1_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-BETA REGULATORY CHAIN	177-204								
PKAP2_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE II-ALPHA REGULATORY CHAIN	175-202	290-317							
PKBF1_HUMAN	NUCLEAR FACTOR KAPPA-B SUBUNIT-1 (NF-KAPPA-B P105 SUBUNIT)	529-570								
PKCRB_HUMAN	CREATINE KINASE, B CHAIN (EC 2.7.3.2).	301-328								
PKECK_HUMAN	TYROSINE PROTEIN-KINASE ECK PRECURSOR (EC 2.7.1.112) (EPITHELIAL CELL	466-493								
PKFER_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FER (EC 2.7.1.112) (P94-FER)	219-246	564-591							

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PKFES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FES/FPS (EC 2.7.1.112) (C-FES)	101-145	295-322							
PKFLT_HUMAN	RECEPTOR-RELATED TYROSINE KINASE FLT PRECURSOR (EC 2.7.1.112).	208-235	319-353							
PKFMS_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR I RECEPTOR PRECURSOR (CSF-1-R)	293-320								
PKFYN_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FYN (EC 2.7.1.112) (P59-FYN)	199-233								
PKGPB_HUMAN	CGMP-DEPENDENT PROTEIN KINASE, BETA ISOZYME (CGK) (EC 2.7.1.37).	17-54								
PKHEK_HUMAN	TYROSINE KINASE HEK RECEPTOR PRECURSOR (EC 2.7.1.112).	646-673								
PKINH_HUMAN	KINESIN HEAVY CHAIN.	125-155	425-452	471-542	633-680	689-716	872-899			
PKKIT_HUMAN	KIT PROTO-ONCOGENE TYROSINE KINASE PRECURSOR (EC 2.7.1.112).	235-263								
PKMET_HUMAN	HEPATOCYTE GROWTH FACTOR RECEPTOR PRECURSOR (MET PROTO-ONCOGENE	898-925								
PKNH_HUMAN	KININOGEN, HMW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR)	505-532								
PKPS8_HUMAN	GALACTOSYLTRANSFERASE ASSOCIATED PROTEIN KINASE P58/GTA (EC 2.7.1.-)	81-108								
PKP68_HUMAN	INTERFERON-INDUCED, DOUBLE-STRANDED RNA-ACTIVATED PROTEIN KINASE	149-179	191-225	285-312						
PKP78_HUMAN	PUTATIVE SERINE/THREONINE-PROTEIN KINASE P78 (EC 2.7.1.-)	582-609								
PKPCL_HUMAN	PROTEIN KINASE C, ETA TYPE (EC 2.7.1.-) (NPKC-ETA) (PKC-L).	318-345								
PKPT1_HUMAN	SERINE/THREONINE-PROTEIN KINASE PCTAIRE-1 (EC 2.7.1.-).	149-176	209-253							
PKPY1_HUMAN	PYRUVATE KINASE, M1 (MUSCLE) ISOZYME (EC 2.7.1.40) (CYTOSOLIC THYROID	243-289								
PKPY2_HUMAN	PYRUVATE KINASE, M2 ISOZYME (EC 2.7.1.40).	243-289								
PKPYR_HUMAN	PYRUVATE KINASE, ISOZYME R (EC 2.7.1.40)	2-29								
PKRET_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE RET (EC 2.7.1.112).	183-217								
PKROS_HUMAN	ROS PROTO-ONCOGENE TYROSINE KINASE (EC 2.7.1.112) (FRAGMENT).	157-203								
PKSRC_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE SRC (EC 2.7.1.112) (P60-SRC)	143-170								
PKU7_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P70 (70 KD SUBUNIT OF KU ANTIGEN).	235-279								
PKU86_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P86 (86 KD SUBUNIT OF KU ANTIGEN).	258-292								
PKYES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE YES (EC 2.7.1.112) (P61-YES)	209-243								
PLAM1_HUMAN	LAMIN B1.	32-66	117-144	152-193	214-241	397-424	480-507	510-539		
PLAMA_HUMAN	LAMIN A (70 KD LAMIN)	32-88	114-165	292-343						
PLAMC_HUMAN	LAMIN C.	32-88	114-165	292-343						
PLAR_HUMAN	LAR PROTEIN PRECURSOR (LEUKOCYTE ANTIGEN RELATED) (EC 3.1.3.48)	935-969								
PLA_HUMAN	LUPUS LA PROTEIN (SJOGREN SYNDROME TYPE B ANTIGEN (SS-B)).	191-222	295-342							
PLCAT_HUMAN	PHOSPHATIDYLCHOLINE-STEROL ACYLTRANSFERASE PRECURSOR (EC 2.3.1.43)	131-158								
PLDHH_HUMAN	L-LACTATE DEHYDROGENASE H CHAIN (EC 1.1.1.27) (LDH-B).	81-108	302-329							
PLDHM_HUMAN	L-LACTATE DEHYDROGENASE M CHAIN (EC 1.1.1.27) (LDH-A)	225-252								
PLDLR_HUMAN	LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR.	483-510								
PLECH_HUMAN	ASIALOGLYCOPROTEIN RECEPTOR 1 (HEPATIC LECTIN H1) (ASGPR).	62-96								
PLEM3_HUMAN	P-SELECTIN PRECURSOR (GRANULE MEMBRANE PROTEIN 140) (GMP-140) (PADGEM)	32-59	87-116							
PLGUL_HUMAN	LACTOYLGLUTATHIONE LYASE (EC 4.4.1.5) (METHYLGLYOXALASE)	83-117								
PLIF_HUMAN	LEUKAEMIA INHIBITORY FACTOR PRECURSOR (LIF) (DIFFERENTIATION-	95-122								
PLIN1_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG.	152-179	232-263	298-358	671-698	874-901	1036-1066			
PLIPG_HUMAN	TRIACYLGLYCEROL LIPASE PRECURSOR (EC 3.1.1.3) (LIPASE, GASTRIC).	158-185								
PLIPS_HUMAN	HORMONE SENSITIVE LIPASE (EC 3.1.1.-) (HSL).	305-332								
PLKHA_HUMAN	LEUKOTRIENE A-4 HYDROLASE (EC 3.3.2.6) (LTA-4 HYDROLASE) (LEUKOTRIENE	42-83	290-324							
PLMA_HUMAN	LAMININ A CHAIN PRECURSOR.	1318-1345	1741-1771	1785-1812	1824-1851	1884-1921	1965-1999	2026-2059	2091-2118	
PLMB1_HUMAN	LAMININ B1 CHAIN PRECURSOR.	1267-1314	1364-1394	1597-1631	1651-1714	1722-1781				
PLMB2_HUMAN	LAMININ B2 CHAIN PRECURSOR.	1103-1135	1513-1547							
PLMP2_HUMAN	LYSOSOME-ASSOCIATED MEMBRANE GLYCOPROTEIN 2 PRECURSOR (LAMP-2)	155-182								
PLOX2_HUMAN	ARACHIDONATE 12-LIPOXYGENASE (EC 1.13.11.31) (12-LOX).	341-368								
PLOX5_HUMAN	ARACHIDONATE 5-LIPOXYGENASE (EC 1.13.11.34) (5-LIPOXYGENASE) (5-LO).	50-87								
PLPH_HUMAN	LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62)	776-803								
PLRPB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE BETA PRECURSOR (EC 3.1.3.48) (PTP-BETA).	140-167	589-637							
PLRPG_HUMAN	PROTEIN-TYROSINE PHOSPHATASE GAMMA PRECURSOR (EC 3.1.3.48)	1081-1108								
PLRPZ_HUMAN	PROTEIN-TYROSINE PHOSPHATASE ZETA PRECURSOR (EC 3.1.3.48) (PTP-ZETA).	553-587	1024-1051	1973-2000						
PLSHR_HUMAN	LUTROPIN-CHORIOGONADOTROPIC HORMONE RECEPTOR PRECURSOR (LH/CG-R)	66-114	448-480							
PLV2B_HUMAN	IG LAMBDA CHAIN V-II REGION (NEI)	61-88								
PLYAG_HUMAN	LYSOSOMAL ALPHA-GLUCOSIDASE PRECURSOR (EC 3.2.1.20) (ACID MALTASE)	885-912								
PM2OM_HUMA	MITOCHONDRIAL 2-OXOGLUTARATE/MALATE CARRIER PROTEIN (OGCP)	50-77								
PMAC1_HUMAN	GALACTOSE-SPECIFIC LECTIN (MAC-2 ANTIGEN) (IGE-BINDING PROTEIN) (35 KD	219-246								
PMAN9_HUMAN	MAN(9)-ALPHA-MANNOSIDASE (EC 3.2.1.-)	414-441								

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FILENAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMANA_HUMA	MANNOSE-6-PHOSPHATE ISOMERASE (EC 5.3.1.8) (PHOSPHOMANNOSE ISOMERASE)	60-87								
PMANR_HUMA	MACROPHAGE MANNOSE RECEPTOR PRECURSOR.	248-284	1147-1182							
PMAP2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 2 (FRAGMENT).	434-478								
PMAP4_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 4.	408-449								
PMAX_HUMAN	MAX PROTEIN.	117-144								
PMDM2_HUMA	MDM2 PROTEIN (P53-ASSOCIATED PROTEIN).	235-288								
PMDR1_HUMAN	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1).	561-595								
PMERL_HUMAN	MERLIN (SCHWANNOMIN).	377-407	532-566							
PMERO_HUMAN	MEROSIN HEAVY CHAIN (LAMININ CHAIN A2) (FRAGMENT).	71-105	139-173	431-458	791-818					
PMGMT_HUMA	METHYLATED-DNA--PROTEIN-CYSTEINE METHYLTRANSFERASE (EC 2.1.1.63) (6-O-	91-118								
PMKLP_HUMAN	MITOTIC KINESIN-LIKE PROTEIN-1.	207-234	319-346	510-537	549-608					
PMLCH_HUMAN	MELANIN-CONCENTRATING HORMONE PRECURSOR.	8-35								
PMLK1_HUMAN	MIXED LINEAGE KINASE 1 (EC 2.7.1.-) (FRAGMENT).	130-157	321-348							
PMMSA_HUMA	METHYLMALONATE-SEMIALDEHYDE DEHYDROGENASE	393-420								
PMOES_HUMAN	MOESIN (MEMBRANE-ORGANIZING EXTENSION SPIKE PROTEIN).	119-146	351-403							
PMPCP_HUMAN	MITOCHONDRIAL PHOSPHATE CARRIER PROTEIN PRECURSOR.	286-313								
PMPD3_HUMAN	M-PHASE INDUCER PHOSPHATASE 3 (EC 3.1.3.48).	72-99								
PMPKK_HUMAN	DUAL SPECIFICITY MITOGEN-ACTIVATED PROTEIN KINASE KINASE (EC 2.7.1.-)	19-50								
PMPRI_HUMAN	CATION-INDEPENDENT MANNOSE-6-PHOSPHATE RECEPTOR PRECURSOR (CI MAN-6-	1569-1596	2437-2478							
PMRP_HUMAN	MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN.	396-423	507-548							
PMSHR_HUMAN	MELANOCYTE STIMULATING HORMONE RECEPTOR (MSH-R) (MELANOTROPIN	38-65								
PMSRE_HUMAN	MACROPHAGE SCAVENGER RECEPTOR TYPES I AND II (MACROPHAGE ACETYLATED	173-204	230-260							
PMTDM_HUMA	DNA (CYTOSINE-5)-METHYLTRANSFERASE (EC 2.1.1.37) (DNA	387-414	601-628							
PMTF1_HUMAN	MITOCHONDRIAL TRANSCRIPTION FACTOR 1 PRECURSOR (MTTF1).	181-212								
PMUTA_HUMAN	METHYLMALONYL-COA MUTASE PRECURSOR (EC 5.4.99.2) (MCM).	468-519								
PMX1_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXA (INTERFERON-	108-150								
PMX2_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXB (P78-RELATED	451-489	670-697							
PMYBA_HUMA	MYB-RELATED PROTEIN A (FRAGMENT).	619-646								
PMYBB_HUMAN	MYB-RELATED PROTEIN B.	87-117								
PMYCN_HUMA	N-MYC PROTO-ONCOGENE PROTEIN.	263-300	413-461							
PMYC_HUMAN	MYC PROTO-ONCOGENE PROTEIN.	393-422								
PMYF4_HUMAN	MYOGENIC FACTOR MYF-4 (MYOGENIN).	119-146								
PMYF5_HUMAN	MYOGENIC FACTOR MYF-5.	121-148								
PMYP2_HUMAN	MYELIN P2 PROTEIN.	70-110								
PMYPR_HUMAN	MYELIN PROTEOLIPID PROTEIN (PLP) (LIPOPHILIN) (CONTAINS: MYELIN	43-70								
PMYSA_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE ALPHA ISOFORM (FRAGMENT).	38-75	84-111	137-178	236-324	398-435	440-485			
PMYSB_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE BETA ISOFORM.	48-75	951-981	997-1044	1088-1122	1192-1234	1266-1332	1360-1408	1442-1479	1488-1532
		1541-1582	1640-1681	1683-1710	1801-1838					
PMYSE_HUMAN	MYOSIN HEAVY CHAIN, FAST SKELETAL MUSCLE, EMBRYONIC.	46-73	860-903	952-1077	1119-1146	1193-1235	1267-1340	1364-1411	1483-1597	1641-1675
		1707-1734	1827-1858							
PMYSP_HUMAN	MYOSIN HEAVY CHAIN, PERINATAL CARDIAC MUSCLE (FRAGMENT).	50-77	95-125	141-188	215-272	403-483	507-552	586-624	685-736	784-818
		823-907	946-987	1049-1076						
PMYSS_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (FRAGMENT).	133-160	193-280	304-349	423-460	468-526	581-608	645-681	743-798	808-835
			846-873							
PMYT1_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT).	640-678								
PNACA_HUMAN	SODIUM/CALCIUM EXCHANGER PRECURSOR (NA+/CA2+-EXCHANGE PROTEIN).	492-519	594-621	705-735						
PNCA2_HUMAN	NEURAL CELL ADHESION MOLECULE, PHOSPHATIDYLINOSITOL-LINKED ISOFORM	255-282								
PNCF1_HUMAN	NEUTROPHIL CYTOSOL FACTOR 1 (NCF-47K) (47 KD AUTOSOMAL CHRONIC	234-261	310-337							
PNCF2_HUMAN	NEUTROPHIL NADPH OXIDASE FACTOR (P67-PHOX).	5-32								
PNEFA_HUMAN	DNA-BINDING PROTEIN NEFA PRECURSOR.	50-77	82-112	343-395						
PNEP_HUMAN	NEPRILYSIN (EC 3.4.24.11) (NEUTRAL ENDOPEPTIDASE) (NEP)	170-216	644-671							
PNF1_HUMAN	NEUROFIBROMIN (NEUROFIBROMATOSIS-RELATED PROTEIN NF-1) (FRAGMENT).	1145-1172	1388-1422	1639-1666						
PNFH_HUMAN	NEUROFILAMENT TRIPLET H PROTEIN (200 KD NEUROFILAMENT PROTEIN) (NF-H).	91-128	431-490							
PNFL_HUMAN	NEUROFILAMENT TRIPLET L PROTEIN (68 KD NEUROFILAMENT PROTEIN) (NF-L).	92-126	441-468							
PNFM_HUMAN	NEUROFILAMENT TRIPLET M PROTEIN (160 KD NEUROFILAMENT PROTEIN) (NF-M)	101-141	164-194	215-280	315-372	737-764	794-826	872-913		
PNK1R_HUMAN	SUBSTANCE-P RECEPTOR (SPR) (NK-1 RECEPTOR) (NK-1R)	338-365								
PNK4_HUMAN	NATURAL KILLER CELLS PROTEIN 4 PRECURSOR	166-193								

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TITLENAME	PROTEIN	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNKCR_HUMAN	NK-TUMOR RECOGNITION PROTEIN (NATURAL-KILLER CELLS CYCLOPHILLIN-	117-214	448-475	559-599	701-742	816-843	1040-1133			
PNKOA_HUMAN	NKG2-A AND NKG2-B TYPE II INTEGRAL MEMBRANE PROTEINS.	28-55								
PNOS1_HUMAN	NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I).	389-416	1116-1146	1292-1319						
PNOS3_HUMAN	NITRIC-OXIDE SYNTHASE, ENDOTHELIAL (EC 1.14.13.39) (EC-NOS) (NOS,	389-416								
PNTG1_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT GABA TRANSPORTER 1.	131-158								
PNTR_HUMAN	NEUROTENSIN RECEPTOR (NT-R).	57-84								
PNTS6_HUMAN	SODIUM-DEPENDENT SEROTONIN TRANSPORTER (5HT TRANSPORTER) (5HTT)	71-98								
PNTTA_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT TAURINE TRANSPORTER.	120-147								
PNUDM_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 2 (EC 1.6.5.3).	202-240								
PNUHM_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4 (EC 1.6.5.3).	164-191	372-399							
PNUBN_HUMAN	NUCLEOBINDIN PRECURSOR.	46-73	360-387							
PNUCL_HUMAN	NUCLEOLIN (PROTEIN C23).	462-508								
PNYTR_HUMAN	PUTATIVE NEUROPEPTIDE Y RECEPTOR TYPE 3 (NPY3-R) (FB22) (NPYRL)	115-142								
POAT_HUMAN	ORNITHINE AMINOTRANSFERASE PRECURSOR (EC 2.6.1.13) (ORNITHINE--KETO-	98-128								
POC1A_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 1A (OCT-1A)	139-173								
POC1B_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 1B (OCT-1B).	33-78								
POCBL_HUMAN	LOWE'S OCULOCEREBRORENAL SYNDROME PROTEIN.	704-735								
PODB1_HUMAN	LIPOAMIDE ACYLTRANSFERASE COMPONENT (E2) PRECURSOR OF BRANCHED-CHA	100-137	375-403							
PODP2_HUMAN	DIHYDROLIPOAMIDE ACETYLTRANSFERASE COMPONENT (E2) OF PYRUVATE	72-99								
POMGP_HUMAN	OLIGODENDROCYTE-MYELIN GLYCOPROTEIN PRECURSOR (OMG)	53-80								
POPSB_HUMAN	BLUE-SENSITIVE OPSIN (BLUE CONE PHOTORECEPTOR PIGMENT).	220-247								
POPSG_HUMAN	GREEN-SENSITIVE OPSIN (GREEN CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POPSR_HUMAN	RED-SENSITIVE OPSIN (RED CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POSTP_HUMAN	OSTEOPONTIN PRECURSOR (BONE SIALOPROTEIN 1) (URINARY STONE PROTEIN)	159-186								
POTC_HUMAN	ORNITHINE CARBAMOYLTRANSFERASE PRECURSOR (EC 2.1.3.3).	170-204								
POTNC_HUMAN	OSTEONECTIN PRECURSOR (BASEMENT MEMBRANE PROTEIN BM-40).	173-207								
POXYB_HUMAN	OXYSTEROL-BINDING PROTEIN.	89-123	190-217	290-317	577-604					
POXYR_HUMAN	OXYTOCIN RECEPTOR (OT-R).	336-377								
PP107_HUMAN	RETINOBLASTOMA-ASSOCIATED PROTEIN-LIKE 107 KD HOMOLOG (P107)	159-186	422-449							
PP1DP_HUMAN	DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1.	19-60	637-664							
PP47_HUMAN	PLECKSTRIN (P47).	298-325								
PP4HA_HUMAN	PROLYL 4-HYDROXYLASE ALPHA SUBUNIT PRECURSOR (EC 1.14.11.2)	29-69	191-218							
PP60_HUMAN	MITOCHONDRIAL MATRIX PROTEIN P1 PRECURSOR (P60 LYMPHOCYTE PROTEIN)	72-99	271-298	361-407						
PP85A_HUMAN	PHOSPHATIDYLINOSITOL 3-KINASE REGULATORY ALPHA SUBUNIT (P13-KINASE	12-39	428-476	586-613	688-715					
PPAP1_HUMAN	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR.	73-104								
PPAX5_HUMAN	PAIRED BOX PROTEIN PAX-5 (B-CELL SPECIFIC TRANSCRIPTION FACTOR)	137-187								
PPDGA_HUMAN	PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)	38-65								
PPECI_HUMAN	PLATELET ENDOTHELIAL CELL ADHESION MOLECULE PRECURSOR (PECAM-1)	685-719								
PPENK_HUMAN	PROENKEPHALIN A PRECURSOR.	142-176								
PPERE_HUMAN	EOSINOPHIL PEROXIDASE PRECURSOR (EC 1.11.1.7) (EPO) (FRAGMENT)	308-335								
PPERF_HUMAN	PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP).	411-438								
PPF4L_HUMAN	PLATELET BASIC PROTEIN PRECURSOR (PBP) (CONTAINS: CONNECTIVE-TISSUE	21-55								
PPGCA_HUMAN	CARTILAGE-SPECIFIC PROTEOGLYCAN CORE PROTEIN PRECURSOR (CSPCP)	73-100								
PPGCS_HUMAN	LARGE FIBROBLAST PROTEOGLYCAN PRECURSOR (VERSICAN) (CHONDROITIN	64-98	1190-1417	1535-1580						
PPGDH_HUMAN	15-HYDROXYPROSTAGLANDIN DEHYDROGENASE (NAD(+)) (EC 1.1.1.141) (PGDH)	87-118								
PPGDR_HUMAN	BETA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	294-321	354-384	465-493						
PPGDS_HUMAN	ALPHA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR.	64-94	347-393	481-488	524-551	986-1058				
PPGHS_HUMAN	PROSTAGLANDIN G/H SYNTHASE PRECURSOR (EC 1.14.99.1) (CYCLOOXYGENASE)	331-358								
PPGS1_HUMAN	BONE/CARTILAGE PROTEOGLYCAN I PRECURSOR (BIGLYCAN) (PG-S1)	100-127								
PPHH1_HUMAN	PHENYLALANINE-4-HYDROXYLASE (EC 1.14.16.1) (PAH) (PHE-4-	259-286								
PPHB_HUMAN	PROHIBITIN.	41-68								
PPHOS_HUMAN	PHOSDUCIN (33 KD PHOTOTRANSDUCING PROTEIN) (MEKA PROTEIN)	184-225								
PPHS1_HUMAN	GLYCOGEN PHOSPHORYLASE, LIVER FORM (EC 2.4.1.1)	116-143								
PPHS2_HUMAN	GLYCOGEN PHOSPHORYLASE, MUSCLE FORM (EC 2.4.1.1)	533-559								
PPHS3_HUMAN	GLYCOGEN PHOSPHORYLASE, BRAIN FORM (EC 2.4.1.1).	533-560								
PPIP4_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE BETA 2	908-935								

PCGENE	187x178x4 Motif Search on All Human Protein Sequences									
FILENAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPDP5_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE GAMMA 2	142-169	239-266							
PPLAK_HUMAN	PLAKOGLOBIN (DESMOPLAKIN III)	373-400								
PPLSL_HUMAN	L-PLASTIN (FIMBRIN)	507-534								
PPLST_HUMAN	T-PLASTIN (FIMBRIN).	510-561								
PPM22_HUMAN	PERIPHERAL MYELIN PROTEIN 22 (PMP-22)	3-33								
PPMGB_HUMAN	PHOSPHOGLYCERATE MUTASE, BRAIN FORM (EC 5 4 2 1) (PGAM-B) (EC 5 4 2 4)	81-111								
PPMGM_HUMA	PHOSPHOGLYCERATE MUTASE, MUSCLE FORM (EC 5 4 2 1) (PGAM-M)	81-115								
PPML1_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-1.	551-585								
PPMLX_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-X	551-585								
PPMSC_HUMAN	AUTOANTIGEN PM-SCL.	103-130								
PPOGA_HUMAN	DNA-BINDING PROTEIN PO-GA.	14-51	182-209	610-637	667-699					
PPOL1_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE	774-804								
PPOL2_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (FRAGMENT).	78-138	171-205							
PPORI_HUMAN	OUTER MITOCHONDRIAL MEMBRANE PROTEIN PORIN (VOLTAGE-DEPENDENT ANIO	33-76	189-216							
PPPAP_HUMAN	PROSTATIC ACID PHOSPHATASE PRECURSOR (EC 3.1.3.2)	235-269								
PPPAS_HUMAN	RED CELL ACID PHOSPHATASE 1, ISOZYME S (EC 3 1.3 2) (ACP1)	26-53								
PPPOL_HUMAN	NAD(+) ADP-RIBOSYLTRANSFERASE (EC 2 4 2.30) (POLY (ADP-RIBOSE)	699-729	972-1003							
PPRC2_HUMAN	PROTEASOME COMPONENT C2 (EC 3 4 99 46) (MACROPAIN SUBUNIT C2)	39-66								
PPRC3_HUMAN	PROTEASOME COMPONENT C3 (EC 3.4.99 46) (MACROPAIN SUBUNIT C3)	34-61								
PPRC9_HUMAN	PROTEASOME COMPONENT C9 (EC 3.4.99.46) (MACROPAIN SUBUNIT C9)	203-261								
PPRGR_HUMAN	PROGESTERONE RECEPTOR (PR) (FORMS A AND B).	846-890								
PPRTS_HUMAN	VITAMIN K-DEPENDENT PROTEIN S (BLOOD CLOTTING) PRECURSOR.	337-371								
PPRTZ_HUMAN	VITAMIN K-DEPENDENT PROTEIN Z PRECURSOR.	29-56								
PPSOR_HUMAN	PSORIASIN.	65-92								
PPSPD_HUMAN	PULMONARY SURFACTANT-ASSOCIATED PROTEIN D PRECURSOR (PSP-D) (SP-D).	224-251								
PPTHY_HUMAN	PARATHYROID HORMONE PRECURSOR (PARATHYRIN).	86-113								
PPTN1_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1B (EC 3.1.3.48) (PTP-1B).	136-177								
PPTN2_HUMAN	T-CELL PROTEIN-TYROSINE PHOSPHATASE (EC 3.1.3.48) (TCPTP).	59-86	138-178							
PPTN6_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1C (EC 3.1.3.48) (PTP-1C) (HEMATOPOIETIC	227-261	512-580							
PPTNB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 2C (EC 3.1.3.48) (PTP-2C) (PTP-1D)	41-68	218-245							
PPTNC_HUMAN	PROTEIN-TYROSINE PHOSPHATASE G1 (EC 3.1.3.48) (PTPG1).	618-645	695-722							
PPTRR_HUMAN	PARATHYROID HORMONE/PARATHYROID HORMONE-RELATED PEPTIDE	368-395								
PPTX3_HUMAN	PENTAXIN-RELATED PROTEIN PTX3 PRECURSOR.	74-101								
PPUR2_HUMAN	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE (EC 6.3.4.13) (GARS) (GLYCINAMIDE	803-830								
PPUR6_HUMAN	MULTIFUNCTIONAL PROTEIN ADE2H1 (PHOSPHORIBOSYLAMINOIMIDAZOLE-	391-418								
PPURS_HUMAN	ADENYLOSUCCINATE LYASE (EC 4.3.2.2) (ADENYLOSUCCINASE) (ASL).	204-231								
PPYR5_HUMAN	URIDINE 5'-MONOPHOSPHATE SYNTHASE (UMP SYNTHASE) (OROTATE	120-150								
PPYRG_HUMAN	CTP SYNTHASE (EC 6.3.4.2) (UTP--AMMONIA LIGASE) (CTP SYNTHETASE).	86-113	300-334							
PPZP_HUMAN	PREGNANCY ZONE PROTEIN PRECURSOR.	315-354	990-1024	1162-1189	1405-1432					
PRA74_HUMAN	TRANSCRIPTION FACTOR IIF, ALPHA SUBUNIT (TFIIF, ALPHA SUBUNIT)	474-501								
PRAB4_HUMAN	RAS-RELATED PROTEIN RAB-4.	38-65								
PRAB6_HUMAN	RAS-RELATED PROTEIN RAB-6.	123-150								
PRADI_HUMAN	RADIXIN.	308-335	414-463	510-537						
PRB11_HUMAN	RAS-RELATED PROTEIN RAB-11 (24KG) (YL8).	151-178								
PRBB3_HUMAN	RETINOBLASTOMA BINDING PROTEIN 3 (RBBP-3) (PRB-BINDING PROTEIN E2F-1)	129-156	161-223							
PRDP_HUMAN	RD PROTEIN.	9-53								
PRENI_HUMAN	RENIN PRECURSOR, RENAL (EC 3.4.23.15) (ANGIOTENSINOGENASE).	136-163								
PREST_HUMAN	RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170).	190-217	333-370	445-472	571-619	744-771	784-852	1023-1050	1088-1139	1157-1184
		1216-1306								
PRFAI_HUMAN	REPLICATION PROTEIN A 70 KD DNA-BINDING SUBUNIT (RP-A) (RF-A)	208-235	425-455							
PRFP_HUMAN	TRANSFORMING PROTEIN (RFP) (RET FINGER PROTEIN).	183-217								
PRH_HUMAN	BLOOD GROUP RH(D) POLYPEPTIDE	361-388								
PRIB1_HUMAN	RIBOPHORIN I PRECURSOR.	81-108	496-530							
PRIB2_HUMAN	RIBOPHORIN II PRECURSOR.	142-172	361-388							
PRIR1_HUMAN	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE M1 CHAIN (EC 1.17 4 1)	42-69	370-400							
PRL22_HUMAN	60S RIBOSOMAL PROTEIN L22 (EPSTEIN-BARR VIRUS SMALL RNA ASSOCIATED	78-112								
PRL26_HUMAN	60S RIBOSOMAL PROTEIN L26	55-89	103-137							

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FILE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRL9_HUMAN	60S RIBOSOMAL PROTEIN L9.	146-192								
PRLA0_HUMAN	60S ACIDIC RIBOSOMAL PROTEIN P0 (L10E)	138-185								
PRO5_HUMAN	52 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A))	190-235	238-265							
PRO6_HUMAN	60 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	192-245								
PROC_HUMAN	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HNRNP C1 AND HNRNP	16-43								
PROL_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN L (HNRNPL)	501-528								
PROU_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN U.	630-657								
PRPB1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 215 KD POLYPEPTIDE	269-296	665-720	879-906	1314-1341	1371-1398				
PRPB2_HUMAN	DNA-DIRECTED RNA POLYMERASE II 140 KD POLYPEPTIDE	626-667	1008-1035							
PRPD1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 33 KD POLYPEPTIDE	242-274								
PRRA_HUMAN	RETINOIC ACID RECEPTOR RXR-ALPHA.	318-352								
PRRB_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 1	376-403								
PRRXC_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 2	396-423								
PRS12_HUMAN	40S RIBOSOMAL PROTEIN S12	60-87								
PRS16_HUMAN	40S RIBOSOMAL PROTEIN S16	80-116								
PRS15_HUMAN	40S RIBOSOMAL PROTEIN S15	26-53								
PRS17_HUMAN	40S RIBOSOMAL PROTEIN S17A	14-41								
PRS7_HUMAN	40S RIBOSOMAL PROTEIN S7 (S8)	73-100								
PRS8_HUMAN	40S RIBOSOMAL PROTEIN S8	116-161								
PRTC1_HUMAN	RAS-LIKE PROTEIN TC21	123-150								
PRU1A_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A (U1 SNRNP A PROTEIN)	13-47								
PRU1A_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A (U1 SNRNP A PROTEIN)	17-44								
PRU2B_HUMAN	U2 SMALL NUCLEAR RIBONUCLEOPROTEIN B"									
PRYR_HUMAN	RYANODINE RECEPTOR, SKELETAL MUSCLE	134-188	495-522	866-893	2750-2777	2820-2847	3304-3331	3529-3556	3912-3939	4921-4948
PS10A_HUMAN	S-100 PROTEIN, ALPHA CHAIN	12-54								
PS10B_HUMAN	S-100 PROTEIN, BETA CHAIN	14-56								
PS10D_HUMAN	S-100D PROTEIN	31-58								
PSAHC_HUMAN	ADENOSYLHOMOCYSTEINASE (EC 3.3.1.1) (S-ADENOSYL-L-HOMOCYSTEINE	389-416								
PSAT1_HUMAN	DNA-BINDING PROTEIN SATB1	709-736								
PSCCA_HUMAN	SQUAMOUS CELL CARCINOMA ANTIGEN (SCCA) (PROTEIN T4-A)	78-105								
PSCF_HUMAN	STEM CELL FACTOR PRECURSOR (SCF)	74-101								
PSEM1_HUMAN	SEMENOGELIN I PROTEIN PRECURSOR (SGI) (CONTAINS: SEMINAL BASIC	64-98	176-226	288-329	334-368					
PSEM2_HUMAN	SEMENOGELIN II PRECURSOR (SGII)	71-98	183-226	304-355	405-439	539-575				
PSET_HUMAN	SET PROTEIN	38-65	134-181							
PSG1_HUMAN	SECRETOGRANIN I PRECURSOR (CHROMOGRANIN B)	144-178								
PSG2_HUMAN	SECRETOGRANIN II PRECURSOR (CHROMOGRANIN C)	234-281	290-317	514-561						
PSIAL_HUMAN	BONE SIALOPROTEIN II PRECURSOR (BSP II)	84-117	155-193	256-283						
PSNIL_HUMAN	POSSIBLE GLOBAL TRANSCRIPTION ACTIVATOR SNF2L	231-258	545-572							
PSNOB_HUMAN	SKI-RELATED ONCOGENE SNON	414-441								
PSPCA_HUMAN	SPECTRIN ALPHA CHAIN.	193-220	570-621	655-712	1099-1126	1461-1502	1882-1909	1988-2022	2120-2154	2223-2250
		2346-2373								
PSPCB_HUMAN	SPECTRIN BETA CHAIN, ERYTHROCYTE	150-177	316-350	486-520	648-675	987-1021	1027-1083	1287-1324	1347-1374	1834-1861
PSPRE_HUMAN	SEPIAPTERIN REDUCTASE (EC 1.1.1.153) (SPR)	90-124								
PSRF_HUMAN	SERUM RESPONSE FACTOR (SRF)	77-104	480-507							
PSRPR_HUMAN	SIGNAL RECOGNITION PARTICLE RECEPTOR ALPHA SUBUNIT (SR-ALPHA)	76-110								
PSSR1_HUMAN	SOMATOSTATIN RECEPTOR TYPE 1.	289-316								
PSTHM_HUMAN	STATHMIN (PHOSPHOPROTEIN P19) (ONCOPROTEIN P19) (LEUKEMIA-ASSOCIATED	42-74								
PSUIS_HUMAN	SUCRASE-ISOMALTASE, INTESTINAL (EC 3.2.1.48) / (EC 3.2.1.10)	1748-1775								
PSYB1_HUMAN	SYNAPTOBREVIN 1.	31-67								
PSYD2_HUMAN	ASPARTYL-TRNA SYNTHETASE ALPHA-2 SUBUNIT (EC 6.1.1.12) (ASPARTATE-	44-71								
PSYEP_HUMAN	MULTIFUNCTIONAL AMINOACYL-TRNA SYNTHETASE (CONTAINS: GLUTAMYL-TRN	174-201	240-271							
PSYH_HUMAN	HISTIDYL-TRNA SYNTHETASE (EC 6.1.1.21) (HISTIDINE-TRNA LIGASE).	380-442	468-502							
PSYTI_HUMAN	SYNAPTOTAGMIN I (P65).	140-167	250-277							
PSYTC_HUMAN	THREONYL-TRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE-TRNA	497-524	658-685							
PSYV_HUMAN	VALYL-TRNA SYNTHETASE (EC 6.1.1.9) (VALINE-TRNA LIGASE) (VALRS).	230-257	413-440							
PSYW_HUMAN	TRYPTOPHANYL-TRNA SYNTHETASE (EC 6.1.1.2) (TRYPTOPHAN-TRNA LIGASE)	93-127	196-223							
PT2EB_HUMAN	TRANSCRIPTION INITIATION FACTOR IIE-BETA CHAIN (TFIIE-BETA).	34-68								
PTAP4_HUMAN	TRANSCRIPTION FACTOR AP-4 (FRAGMENT)	169-196	245-272							

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FILENAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTAPB_HUMAN	TRANSCRIPTION FACTOR JUN-B	296-323								
PTAPD_HUMAN	TRANSCRIPTION FACTOR JUN-D.	291-333								
PTAU1_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU	278-305								
PTAU2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU, FETAL	211-238								
PTCO1_HUMAN	TRANSCOBALAMIN I PRECURSOR.	201-241	330-357							
PTCP1_HUMAN	T-COMPLEX PROTEIN 1 (TCP-1)	316-343								
PTDT_HUMAN	DNA NUCLEOTIDYLEXOTRANSFERASE (EC 2 7.7 31) (TERMINAL ADDITION ENZYME)	61-95								
PTEK_HUMAN	RECEPTOR TYROSINE-PROTEIN KINASE TEK PRECURSOR (EC 2 7 1.112) (HPK-6)	644-678	969-996	1007-1036						
PTF2B_HUMAN	TRANSCRIPTION INITIATION FACTOR IID (TFIID)	135-162								
PTFE3_HUMAN	TRANSCRIPTION FACTOR E3 (FRAGMENT)	43-70	122-149	178-226						
PTFS2_HUMAN	TRANSCRIPTION ELONGATION FACTOR S-II.	29-56								
PTF_HUMAN	TISSUE FACTOR PRECURSOR (TF) (COAGULATION FACTOR III)	148-175								
PTGF1_HUMAN	TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1)	148-185								
PTGF2_HUMAN	TRANSFORMING GROWTH FACTOR BETA 2 PRECURSOR (TGF-BETA 2) (GLIOBLASTO	243-270								
PTGFA_HUMAN	TRANSFORMING GROWTH FACTOR ALPHA PRECURSOR (TGF-ALPHA) (EGF-LIKE TGF	87-114								
PTGLK_HUMAN	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE K (EC 2 3 2 13)	258-285								
PTHBS_HUMAN	THROMBOSPONDIN PRECURSOR.	110-165	284-314							
PTHIK_HUMAN	3-KETOACYL-COA THIOLASE PEROXISOMAL PRECURSOR (EC 2 3.1.16) (BETA-	185-212								
PTKNB_HUMAN	PROTACHYKININ BETA PRECURSOR (CONTAINS: SUBSTANCE P, NEUROKININ A	11-38								
PTLE1_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 1.	626-653								
PTLE2_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 2.	94-125								
PTLE4_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 4 (FRAGMENT)	304-331								
PTOPA_HUMAN	DNA TOPOISOMERASE II, ALPHA ISOZYME (EC 5.99 1.3).	19-46	503-532							
PTOPB_HUMAN	DNA TOPOISOMERASE II, BETA ISOZYME (EC 5 99.1.3).	35-65	616-647							
PTPM3_HUMAN	TROPOMYOSIN, FIBROBLAST ISOFORM TM3.	16-74	82-116							
PTPMA_HUMAN	TROPOMYOSIN ALPHA CHAIN, SKELETAL MUSCLE	16-43	47-74	82-116	147-174	191-237	243-277			
PTPMB_HUMAN	TROPOMYOSIN BETA CHAIN, SKELETAL MUSCLE.	37-116	193-240							
PTPMC_HUMAN	TROPOMYOSIN ALPHA CHAIN, CARDIAC MUSCLE	16-74	82-116	193-277						
PTPMF_HUMAN	TROPOMYOSIN, FIBROBLAST AND EPITHELIAL MUSCLE-TYPE (TM36) (TME1)	37-116	210-240	243-270						
PTPMG_HUMAN	TROPOMYOSIN, FIBROBLAST NON-MUSCLE TYPE (TM30PL)	46-80	111-138	158-199	207-234					
PTPMI_HUMAN	TROPOMYOSIN, CYTOSKELETAL TYPE (TM30NM)	46-80	111-138	172-199						
PTPMS_HUMAN	TROPOMYOSIN ALPHA CHAIN, SMOOTH MUSCLE (FRAGMENT)	25-59	147-178							
PTPP2_HUMAN	TRIPEPTIDYL-PEPTIDASE II (EC 3.4 14 10) (TPP II) (TRIPEPTIDYL	153-187	1004-1031	1160-1187						
PTPR_HUMAN	TPR ONCOGENE (FRAGMENT)	82-147								
PTRJ6_HUMAN	TREB36 PROTEIN.	18-45	242-269							
PTRFR_HUMAN	THYROTROPIN-RELEASING HORMONE RECEPTOR (TRH-R) (THYROLIBERIN	349-383								
PTRIC_HUMAN	TROPONIN I, CARDIAC MUSCLE.	36-63								
PTRKA_HUMAN	HIGH AFFINITY NERVE GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7 1 112)	66-93	117-148							
PTRSR_HUMAN	TRANSFERRIN RECEPTOR PROTEIN (TR) (ANTIGEN CD71) (T9)	188-215	366-393							
PTSHR_HUMAN	THYROTROPIN RECEPTOR PRECURSOR (TSH-R)	87-117	420-447							
PTTK_HUMAN	PROTEIN KINASE TKK (EC 2 7.1 -)	170-197	324-359	510-544	549-583					
PTYK2_HUMAN	NON-RECEPTOR TYROSINE-PROTEIN KINASE TYK2 (EC 2.7.1.112)	150-177								
PUBA1_HUMAN	UBIQUITIN-ACTIVATING ENZYME E1 (A1S9 PROTEIN)	448-475								
PUBF1_HUMAN	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1)	227-254								
PUDP0_HUMAN	UDP-GLUCURONOSYLTRANSFERASE PRECURSOR, MICROSOMAL (EC 2 4 1 17)	227-254								
PUFO_HUMAN	RECEPTOR TYROSINE-PROTEIN KINASE UFO PRECURSOR (EC 2.7 1 112)	488-522								
PUSF1_HUMAN	UPSTREAM STIMULATORY FACTOR 1.	251-295								
PVATC_HUMAN	VACUOLAR ATP SYNTHASE SUBUNIT C (EC 3 6.1.34) (V-ATPASE C SUBUNIT)	47-74	117-147							
PVIL1_HUMAN	VILLIN.	338-372	427-461	717-744						
PVIME_HUMAN	VIMENTIN.	119-146	233-260							
PVINC_HUMAN	VINCULIN.	108-135								
PVPRT_HUMAN	RETROVIRUS-RELATED PROTEASE (EC 3 4 23 -)	95-134								
PWEE1_HUMAN	WEE1-LIKE PROTEIN KINASE (EC 2.7.1.112)	354-388								
PWT1_HUMAN	WILMS' TUMOR PROTEIN (WT33)	247-274								
PXBP1_HUMAN	X BOX BINDING PROTEIN-1 (XBP-1) (TREB5 PROTEIN)	97-135								
PXPAC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-A CELLS (XERODERMA PIGMENTOSUM	180-211								
PXPCC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM	134-168	701-728							

PCGENE	107:1781 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
ULL NAME	PROTEIN									
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM	264-291								
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-G CELLS (XERODERMA PIGMENTOSUM	83-110	715-766	1047-1081						
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-G CELLS (XERODERMA PIGMENTOSUM		23-57							
XRCC_HUMAN	DNA-REPAIR PROTEIN XRCC1.		29-56							
ZN10_HUMAN	ZINC FINGER PROTEIN 10 (ZINC FINGER PROTEIN KOX1) (FRAGMENT)		307-334	1071-1078	1401-1500	2013-2057	2146-2180			
ZN40_HUMAN	ZINC FINGER PROTEIN 40 ((HUMAN IMMUNODEFICIENCY VIRUS TYPE I ENHANCER-	17-62								
ZN45_HUMAN	ZINC FINGER PROTEIN 45 (BRC1744) (FRAGMENT).	3-30	201-228							
ZN46_HUMAN	ZINC FINGER PROTEIN 46 (ZINC FINGER PROTEIN KUP).	121-149								

TABLE X

Search Results Summary for PCTLZIP, P1CTLZIP, and P2CTLZIP Motifs

P1CTL2IP								P2CTL2IP			
LIBRARY FILE								LIBRARY FILE			
PENV_FOAMV	401-496	PENV_BIV08	434-460					PENV_BIV08	626-642		
PENV_HV1MA	438-463	PENV_BIV27	403-479					PENV_BIV27	554-571		
PENV_HV1MF	183-198	PENV_FOAMV	481-496	864-880				PENV_FENV1	30-47	830-847	
PENV_HV1RH	446-460	PENV_HV1K8	762-768					PENV_FIVPE	781-798		
PENV_HV1BC	186-201	PENV_HV1MA	437-463					PENV_FIV8D	778-796		
PENV_HV122	123-138	PENV_HV1MF	183-198					PENV_FIVT2	780-797		
PENV_HV12H	438-463	PENV_HV1RH	444-460					PENV_FLVC0	38-56	824-841	
PENV_HV28E	760-765	PENV_HV1B1	738-764					PENV_FLVOL	806-822		
PENV_HV2D1	741-756	PENV_HV18C	186-201					PENV_FLVLB	626-642		
PENV_HV2Q1	741-756	PENV_HV122	123-138					PENV_FLV8A	602-618		
PENV_HV2N2	742-757	PENV_HV123	117-133					PENV_FOAMV	710-727	867-874	
PENV_HV2RO	761-786	PENV_HV12H	437-463					PENV_FBVGA	626-642		
PENV_HV28B	743-758	PENV_HV28E	760-785					PENV_FBVOB	608-622		
PENV_HV28T	746-760	PENV_HV2D1	741-756					PENV_FBVBM	608-626		
PENV_JSRV	104-119	PENV_HV2Q1	741-756					PENV_HV1OY	123-140		
PENV_MMTVB	618-633	PENV_HV2N2	742-757					PENV_HV122	410-427		
PENV_MMTVO	618-633	PENV_HV2RO	761-786					PENV_HV123	164-171		
PENV_8IVMK	138-164	PENV_HV28B	743-758					PENV_HV2CA	760-767		
PENV_8IVML	138-164	PENV_HV28T	746-760					PENV_MCFF	600-617		
PHEMA_CVBLY	391-406	PENV_J8RV	104-119	541-557				PENV_MCFF3	601-618		
PHEMA_CVBM	391-406	PENV_MCFF	397-413					PENV_MLVAV	630-647		
PHEMA_CVBQ	391-406	PENV_MCFF3	397-413					PENV_MLVCB	625-642		
PHEMA_CVHOC	391-406	PENV_MLVAV	427-443					PENV_MLVF5	638-656		
PHEMA_CVMA5	402-417	PENV_MLVCB	422-438					PENV_MLVFF	638-656		
PHEMA_CVM5	403-418	PENV_MLVHO	423-439					PENV_MLVFP	638-656		
PHEMA_INBAA	286-310	PENV_MLVMO	426-442					PENV_MLVHO	626-643		
PHEMA_INBBE	303-318	PENV_MLVRD	424-440					PENV_MLVKI	107-184		
PHEMA_INBBO	283-308	PENV_MLVRK	424-440					PENV_MLVMO	629-646		
PHEMA_INBEN	301-316	PENV_MMTVB	618-633					PENV_MLVRD	624-641		
PHEMA_INBFU	286-301	PENV_MMTVO	618-633					PENV_MLVRK	624-641		
PHEMA_INBGL	286-311	PENV_8FV1	864-880					PENV_M8VFB	170-187		
PHEMA_INBHK	283-308	PENV_8FV3L	861-877					PENV_RMCFV	803-820		
PHEMA_INBIB	286-303	PENV_8IVGB	93-109					PENV_8FV1	710-727	867-874	
PHEMA_INBID	286-314	PENV_8IVMK	138-164	802-818				PENV_8FV3L	707-724	864-871	
PHEMA_INBLE	302-317	PENV_8IVML	138-164	801-817				PENV_8IVM1	768-783		
PHEMA_INBMD	282-307	PENV_8IV84	808-822					PENV_8IVMK	768-782		
PHEMA_INBME	286-311	PENV_8IV8P	810-826					PENV_8IVML	764-781		
PHEMA_INBNA	286-303	PHEMA_CDVO	30-62					PENV_8IV84	768-786		
PHEMA_INBOR	301-316	PHEMA_CVBLY	391-406					PENV_8IV8P	773-790		
PHEMA_INBSI	301-316	PHEMA_CVBM	391-406					PENV_8MRVH	836-853		
PHEMA_INBUJ	286-313	PHEMA_CVBQ	391-406					PENV_8M3AV	42-59		
PHEMA_INBUB	284-300	PHEMA_CVHOC	391-406					PHEMA_CDVO	30-63	200-217	
PHEMA_INBVI	286-311	PHEMA_CVMA5	402-417					PHEMA_CVBLY	391-408		
PHEMA_INBVK	303-318	PHEMA_CVM5	403-418					PHEMA_CVBM	391-408		
PHEMA_INBYB	286-301	PHEMA_IAAIC	237-253					PHEMA_CVBQ	391-408		

PHEMA_MUMPM	133-148		PHEMA_IABAN	221-237				PHEMA_CVHOC	391-408		
PHEMA_MUMPR	133-148		PHEMA_IABUD	234-250				PHEMA_IAAIC	322-339		
PHEMA_MUMPS	133-148		PHEMA_IACKA	234-250				PHEMA_IABAN	306-323		
PHEMA_PI1HW	345-360		PHEMA_IACKG	231-247				PHEMA_IABUD	320-337		
PHEMA_PI2H	65-80		PHEMA_IACKV	230-246				PHEMA_IACKA	320-337		
PHEMA_PI2HT	65-80		PHEMA_IADA1	234-250				PHEMA_IACKG	316-333		
PHEMA_RINDK	366-383		PHEMA_IADA3	237-253				PHEMA_IACKP	302-319		
PHEMA_SV5	7-94		PHEMA_IADCZ	234-250				PHEMA_IACKQ	302-319		
PHEMA_SV5CM	7-94		PHEMA_IADH1	221-237				PHEMA_IACKS	319-336		
PHEMA_SV5CP	7-94		PHEMA_IADH2	221-237				PHEMA_IACKV	315-332		
PHEMA_SV5LN	7-94		PHEMA_IADH3	221-237				PHEMA_IADA1	320-337		
PVENV_DHVI1	42-57		PHEMA_IADH4	221-237				PHEMA_IADA3	322-339		
PVFP7_CAPVK	89-104		PHEMA_IADH5	221-237				PHEMA_IADCZ	320-337		
PVFU8_VACC8	72-87		PHEMA_IADH6	221-237				PHEMA_IADH1	306-323		
PVG01_BPP22	242-257		PHEMA_IADH7	221-237				PHEMA_IADH2	306-323		
PVG01_HSVEB	169-184		PHEMA_IADM2	237-253				PHEMA_IADH3	306-323		
PVG01_HSVI1	210-225	317-332	PHEMA_IADNZ	234-250				PHEMA_IADH4	306-323		
PVG06_BPT4	184-199		PHEMA_IAEN6	221-237				PHEMA_IADH6	306-323		
PVG07_BPT4	885-900		PHEMA_IAEN7	237-253				PHEMA_IADH7	306-323		
PVG08_HSVI1	134-149		PHEMA_IAFPR	230-246				PHEMA_IADM2	322-339		
PVG10_BPPH2	183-198		PHEMA_IAHAL	236-252				PHEMA_IADNZ	320-337		
PVG10_BPPZA	183-198		PHEMA_IAHAR	235-251				PHEMA_IADU3	322-339		
PVG10_HSV8A	109-124		PHEMA_IAHC6	230-246				PHEMA_IAEN6	306-323		
PVG10_BPP1	81-96		PHEMA_IAHC7	230-246				PHEMA_IAEN7	322-339		
PVG10_BPT4	468-483		PHEMA_IAHCD	230-246				PHEMA_IAFPR	315-332		
PVG25_BPT4	97-112		PHEMA_IAHDE	230-246				PHEMA_IAGRE	320-337		
PVG29_HSVI1	20-35		PHEMA_IAHFO	236-252				PHEMA_IAGU2	320-337		
PVG30_BPPH6	11-94		PHEMA_IAHK6	236-252				PHEMA_IAGUA	319-336		
PVG36_BPOX2	22-37		PHEMA_IAHK7	236-252				PHEMA_IAHAL	321-338		
PVG36_HSV8A	108-123		PHEMA_IAHLE	230-246				PHEMA_IAHC6	315-332		
PVG37_BPT2	1253-1268		PHEMA_IAHLO	230-246				PHEMA_IAHC7	315-332		
PVG37_HSVI1	284-299		PHEMA_IAHMI	236-252				PHEMA_IAHCD	315-332		
PVG55_HSVI1	22-37	143-158	PHEMA_IAHNM	236-252				PHEMA_IAHDE	315-332		
PVG56_HSVI1	268-283		PHEMA_IAHRO	236-252				PHEMA_IAHFO	321-338		
PVG58_HSVI1	102-117		PHEMA_IAHSA	236-252				PHEMA_IAHK6	321-338		
PVG59_HSVI1	267-282		PHEMA_IAHSP	230-246				PHEMA_IAHK7	321-338		
PVG65_HSVI1	518-533		PHEMA_IAHSW	230-246				PHEMA_IAHLE	316-332		
PVG9_BPPH2	234-249		PHEMA_IAHTE	236-252				PHEMA_IAHLO	315-332		
PVG9_BPPZA	234-249		PHEMA_IAHTO	236-252				PHEMA_IAHMI	321-338		
PVG9_BPV1R	67-72		PHEMA_IAHUR	236-252				PHEMA_IAHNM	321-338		
PVGF_BPPHX	234-249		PHEMA_IAKIE	235-251				PHEMA_IAHNN	316-332		
PVGL2_CVBF	264-279		PHEMA_IALEN	235-251				PHEMA_IAHPR	315-332		
PVGL2_CVBL9	264-279		PHEMA_IAMAA	233-249				PHEMA_IAHRO	321-338		
PVGL2_CVBLY	264-279		PHEMA_IAMAB	238-254				PHEMA_IAHSA	321-338		
PVGL2_CVBM	264-279		PHEMA_IAMAO	237-253				PHEMA_IAHSP	315-332		
PVGL2_CVBQ	264-279		PHEMA_IAME1	237-253				PHEMA_IAHSW	315-332		
PVGL2_CVBV	264-279		PHEMA_IAME2	237-253				PHEMA_IAHTE	321-338		

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PVMT2_IALE1	26-40		PHEMA_PI3B	324-340				PHEMA_8V41	86-102		
PVMT2_IALE2	26-40		PHEMA_PI3H4	324-340				PHEMA_8V5	84-101		
PVMT2_IAMAN	26-40		PHEMA_PI3HA	324-340				PHEMA_8V5CM	84-101		
PVMT2_IAPUE	26-40		PHEMA_PI3HT	324-340				PHEMA_8V5CP	84-101		
PVMT2_IASIN	26-40		PHEMA_PI3HU	324-340				PHEMA_8V5LN	84-101		
PVMT2_IAUDO	26-40		PHEMA_PI3HV	324-340				PVF05_VACCC	280-297		
PVMT2_IAWIL	26-40		PHEMA_PI3HW	324-340				PVF05_VACCP	280-297		
PVMT9_MYXVL	226-241		PHEMA_PI3HX	324-340				PVF05_VACCV	281-298		
			PHEMA_RINDK	368-383				PVF09_VACCC	176-193		
			PHEMA_8V5	7-94				PVF09_VACCV	176-193		
			PHEMA_8V5CM	7-94				PVG27_H8V8A	209-226		
			PHEMA_8V5CP	7-94				PVG28_H8VI1	173-190		
			PHEMA_8V5LN	7-94				PVG39_H8VI1	648-665		
			PVENV_DHVI1	42-57				PVG43_H8VI1	109-126	621-638	
			PVENV_EAV	25-41				PVG67_H8VI1	171-188		
			PVFP2_FOWPV	88-104				PVG72_H8VI1	1262-1280		
			PVFP7_CAPVK	89-104				PVGF1_IBVB	3073-3090		
			PVFU6_VACC6	72-87				PVGL2_IBV6	1094-1111		
			PVG01_H8VEB	169-184				PVGLB_H8VE1	736-753		
			PVG01_H8VI1	209-226	317-332			PVGLB_H8VE4	675-692		
			PVG08_H8VI1	134-149				PVGLB_H8VEA	736-753		
			PVG10_H8V8A	109-124				PVGLB_H8VEB	736-753		
			PVG11_H8VI1	103-119				PVGLB_H8VEL	736-753		
			PVG12_H8VI1	270-286				PVGLB_ILTV6	597-614		
			PVG1_8PV1R	76-92				PVGLB_ILTV8	607-624		
			PVG29_H8VI1	20-36				PVGLB_ILTVT	607-624		
			PVG36_BPOX2	22-37				PVGLC_PRVIF	180-197		
			PVG36_H8V8A	108-123				PVGLE_VZVD	469-486		
			PVG37_H8VI1	284-299				PVGLF_8V5	401-418		
			PVG41_H8VI1	244-260				PVGLH_HCMVA	365-382		
			PVG46_H8VI1	1244-1260				PVGLH_HCMVT	364-381		
			PVG55_H8VI1	22-37	143-158			PVGLH_H8V11	245-262	803-820	
			PVG56_H8VI1	266-283				PVGLH_H8V1E	245-262	803-820	
			PVG58_H8VI1	101-117				PVGLI_H8V11	43-60		
			PVG58_H8V9A	130-146	330-346			PVGLM_BUNL7	81-98		
			PVG59_H8VI1	267-282				PVGLM_BUN8H	81-98		
			PVG65_H8VI1	362-378	516-533			PVGLM_PUUMH	712-729		
			PVG71_H8V8A	89-105				PVGLM_PUUM8	712-729		
			PVG9_8PPH2	234-249				PVGLM_RVFV	344-361		
			PVG9_8PPZA	234-249				PVGLM_RVFVZ	344-361		
			PVG9_8PV1R	57-72				PVGLY_LA98G	12-94		
			PVGF1_IBVB	2210-2226				PVGLY_LA98J	12-94		
			PVGL2_CVBF	123-139	174-190	264-279		PVGLY_LYCVA	12-94		
			PVGL2_CVBL9	123-139	174-190	264-279		PVGLY_LYCVW	12-94		
			PVGL2_CVBLY	123-139	174-190	264-279		PVGLY_MOPEI	12-94		
			PVGL2_CVBM	123-139	174-190	264-279		PVM1_REOVD	280-297		
			PVGL2_CVBQ	31-47	123-139	174-190	264-279	PVM1_REOVL	280-297		

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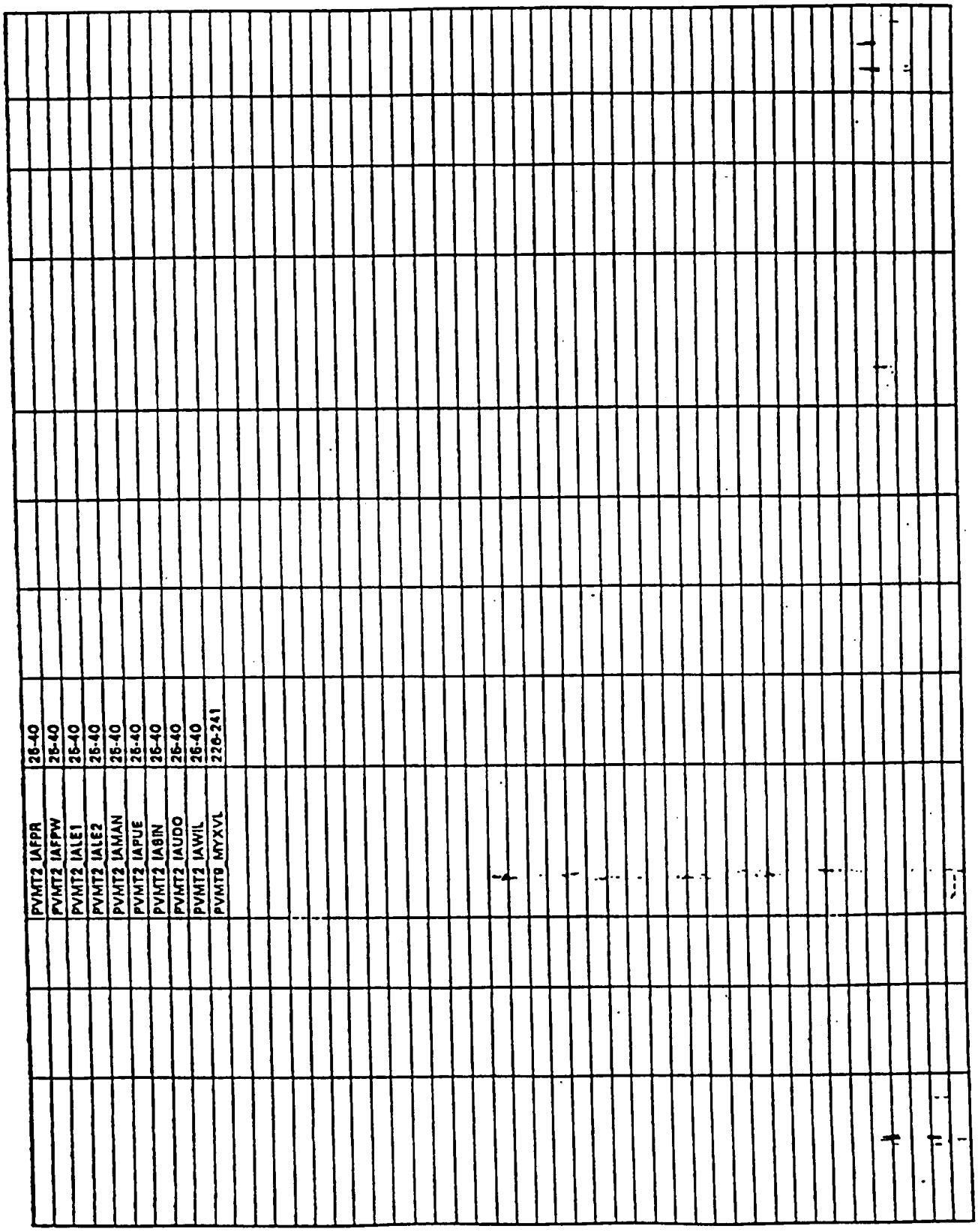

PVMT2 IAFPR 26-40
PVMT2 IAFPW 26-40
PVMT2 IALE1 26-40
PVMT2 IALE2 26-40
PVMT2 IAMAN 26-40
PVMT2 IAPUE 26-40
PVMT2 IABIN 26-40
PVMT2 IAUDO 26-40
PVMT2 IAWIL 26-40
PVMT0 MYXVL 226-241

TABLE XI

Search Results Summary for P3CTLZIP, P4CTLZIP, P5CTLZIP, and P6CTLZIP Motifs

P3CTLZIP			P4CTLZIP			P5CTLZIP			P6CTLZIP			
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			
PENV_BIV27	147-166		PENV1_FR9FV	380-399		PENV1_FR9FV	380-400		PENV_BIV06	47-68	626-646	
PENV_CAEVC	810-828		PENV_AVI6U	98-117		PENV2_FR9FV	380-400		PENV_BIV27	47-68	147-168	564-575
PENV_CAEVQ	808-826		PENV_BIV27	147-166		PENV_BAEVM	170-190		PENV_FENV1	226-246	630-651	
PENV_HV2BE	760-788		PENV_HV1ZH	123-142		PENV_FIVPE	781-801		PENV_FLVC6	624-645		
PENV_HV2D1	741-759		PENV_HV2D2	9-29		PENV_FIV9D	779-799		PENV_FLVQL	447-466	606-626	
PENV_HV2Q1	741-759		PENV_HV25B	778-797		PENV_FIVT2	780-800		PENV_FLVL8	467-488	625-646	
PENV_HV2NZ	742-760		PENV_J9RV	641-660		PENV_FLVQL	9-29		PENV_FLV9A	444-465	602-623	
PENV_HV2RO	751-769		PENV_RSVP	533-552		PENV_FOAMV	265-275	924-944	PENV_FOAMV	153-174	957-978	
PENV_HV29B	743-761		PHEMA_VACCC	173-192		PENV_F9VQA	9-29		PENV_F9VQA	467-488	626-646	
PENV_HV28T	746-763		PHEMA_VACCI	173-192		PENV_HV1C4	420-448		PENV_F6VQB	447-468	606-626	
PENV_J9RV	378-394		PHEMA_VACCT	173-192		PENV_HV2CA	760-770		PENV_F9V9M	460-471	608-629	
PHEMA_PI2H	118-136		PHEMA_VACCV	173-192		PENV_MLVF6	400-420		PENV_F6V6T	467-488		
PHEMA_PI2HT	118-136		PVENV_BEV	62-81		PENV_MMTV8	643-663		PENV_GALV	62-73	619-640	
PHEMA_SV41	66-73		PVENV_MCV1	61-80		PENV_MMTVQ	643-663		PENV_HV28E	760-771		
PVENV_THOQV	473-491		PVENV_MCV2	61-80		PENV_OMVV9	76-95		PENV_HV2Q1	741-762		
PVG16_BPP22	83-101		PVFUS_ORFNZ	29-48		PENV_RSVP	42-62		PENV_HV2NZ	742-763		
PVG24_BPT4	116-133		PVG01_H9VEB	169-188		PENV_9FV1	924-944		PENV_HV2RO	751-772		
PVG36_H6V8A	344-362		PVG01_VACCC	376-395		PENV_6FV3L	921-941		PENV_HV25T	745-766		
PVG40_H9VI1	14-32		PVG01_VACCV	315-334		PENV_9IVM1	766-786		PENV_MCFF	600-621		
PVG50_H6V8A	6-24		PVG01_VARV	376-395		PENV_6IVMK	765-785		PENV_MCFF3	601-622		
PVG61_BPT4	63-81		PVG06_BPT4	627-646		PENV_6IVML	764-784		PENV_MLVAV	630-651		
PVG61_H6VI1	84-102		PVG10_H6VI1	36-54		PENV_6IV84	769-789		PENV_MLVCB	626-646		
PVG66_H9VI1	166-173		PVG11_H9VI1	103-122	150-169	PENV_9IV8P	773-793		PENV_MLVF5	639-660		
PVGF1_IBV8	2788-2806	3374-3392	PVG1_BPPH2	31-50		PHEMA_CDVO	493-513		PENV_MLVFF	639-660		
PVGL2_CVH22	1053-1071		PVG1_BPV1R	659-678		PHEMA_CVBLY	391-411		PENV_MLVFP	639-660		
PVGL2_IBV8	1056-1074		PVG20_BPT4	231-250		PHEMA_CVBM	391-411		PENV_MLVHO	626-647		
PVGL2_IBVB	1055-1073		PVG32_VZVD	90-109		PHEMA_CVBQ	391-411		PENV_MLVKI	167-188		
PVGL2_IBVD2	1056-1074		PVG36_BPK3	132-151		PHEMA_CVHOC	391-411		PENV_MLVMO	629-650		
PVGL2_IBVK	1055-1073		PVG37_BPT2	19-38	620-648	PHEMA_CVMA5	402-422		PENV_MLVRD	624-645		
PVGL2_IBVM	1056-1073		PVG37_BPT4	19-38	625-644	PHEMA_IACKQ	81-101		PENV_MLVRK	624-645		
PVGL8_H9V81	660-678	689-707	PVG39_H9VI1	1038-1057		PHEMA_IADMA	81-101		PENV_M9VFB	170-191		
PVGL8_H6VBC	692-710		PVG41_H9VI1	62-81		PHEMA_MUMPM	397-417		PENV_RMCFV	603-624		
PVGL8_H9V9A	684-702		PVG43_BPPF3	380-399		PHEMA_MUMPR	397-417		PENV_9FV1	957-978		
PVGL8_ILTV8	740-758		PVG46_BPPF1	337-356		PHEMA_MUMP9	397-417		PENV_6FV3L	157-178	954-976	
PVGL8_ILTV8	760-788		PVG59_H9VI1	142-161		PHEMA_PHODV	493-513		PENV_9IVA1	437-458		
PVGL8_ILTVT	760-788		PVG61_H8VI1	117-136		PHEMA_PI1HW	322-342		PENV_9IVAQ	442-463		
PVGLC_VZVD	431-449		PVG67_H9VI1	318-337	1072-1091	PHEMA_PI2H	13-33		PENV_9IVAI	421-442		
PVGLC_VZV9	431-449		PVGF1_IBV8	1587-1606	2108-2127	PHEMA_PI2HT	13-33		PENV_9IVAT	436-456		
PVGLF_PI3H4	2-24		PVGL2_CVBF	991-1010		PHEMA_RINDL	497-517		PENV_9M9AV	42-63		
PVGLH_H6V6Q	314-332		PVGL2_CVBL8	991-1010		PHEMA_9END5	322-342		PHEMA_CVMA5	402-423		
PVGLH_H9VE4	814-832		PVGL2_CVBLY	991-1010		PHEMA_9ENDF	322-342		PHEMA_IADE1	266-287		
PVGLH_H6VE8	807-825		PVGL2_CVBM	991-1010		PHEMA_9ENDH	322-342		PHEMA_MUMPM	225-246		
PVGLI_H9V11	6-24		PVGL2_CVBQ	991-1010		PHEMA_9ENDJ	322-342		PHEMA_MUMPR	225-246		
PVGNM_BPMV	678-696		PVGL2_CVBV	991-1010		PHEMA_9ENDZ	322-342		PHEMA_MUMP8	225-246		
PVM01_VACCC	134-152	177-195	PVGL2_CVH22	788-787	1116-1134	PVENV_LELV	27-47	148-168	PHEMA_PHODV	213-234		

PVM01_VACCV	83-101	126-144	PVGL2_CVM4	999-1018		PVENV_THOGV	366-376		PHEMA_PI2H	13-34		
PVM1_REOVD	227-246		PVGL2_CVMA5	947-966		PVG01_VACCC	298-318		PHEMA_PI2HT	13-34		
PVM1_REOVL	227-246		PVGL2_CVMJH	858-877		PVG01_VACCV	237-257		PHEMA_SV5	7-28	379-400	
PVMAT_HR5VA	44-62		PVGL2_CVPF5	64-83	1030-1057	PVG01_VARV	298-318		PHEMA_SV5CM	7-28	379-400	
PVMAT_NDVA	190-208		PVGL2_CVPPU	64-83	1030-1055	PVG08_VACCC	31-51		PHEMA_SV5CP	7-28	379-400	
PVMAT_NDVB	190-208		PVGL2_CVPR5	814-833		PVG08_VARV	31-51		PHEMA_SV5LN	7-28	379-400	
PVMP_CAMVC	183-201		PVGL2_CVPRM	814-833		PVG09_BPPF1	26-46		PVG01_H5VE5	189-190		
PVMP_CAMVD	183-201		PVGL2_FIPV	1041-1060		PVG12_H5VI1	161-171		PVG01_H5VI1	589-610		
PVMP_CAMVE	183-201		PVGL2_IBV5	588-607	771-700	PVG22_H5VI1	300-320		PVG23_H5VI1	314-336		
PVMP_CAMVN	183-201		PVGL2_IBVB	587-606	770-789	PVG39_H5VI1	640-668	970-990	PVG37_BPOX2	86-06		
PVMP_CAMV5	183-201		PVGL2_IBVD2	588-607	771-700	PVG51_H5VI1	29-49		PVG43_H5VI1	157-178		
PVMP_CAMVW	183-201		PVGL2_IBVK	587-606	770-789	PVG63_H5VI1	338-358		PVG55_H5VI1	288-309		
PVMP_FMVD	180-198		PVGL2_IBVM	587-606	770-780	PVG65_H5VI1	117-137		PVG66_H5V8A	86-106		
			PVGL8_HCMVA	706-725		PVG74_H5V8A	124-144		PVG58_H6VI1	1165-1178		
			PVGL8_HCMVT	707-726		PVGL2_IBV6	328-348		PVG68_H5V8A	266-287		
			PVGL8_H5V6U	117-136		PVGL2_IBVB	327-347		PVG60_H5VI1	30-51		
			PVGL8_ILTV6	256-275		PVGL2_IBVD2	328-348		PVG63_H5VI1	238-259		
			PVGL8_ILTV5	266-285		PVGL2_IBVD3	328-348		PVGF1_IBVB	1856-1877		
			PVGL8_ILTVT	266-286		PVGL2_IBVK	327-347		PVGH3_HCMVA	157-178		
			PVGLC_H6V11	3-84	467-486	PVGL2_IBVM	327-347	378-388	PVGL2_CVBF	1259-1280		
			PVGLC_H5V1K	3-84	467-486	PVGL2_IBVU2	310-330		PVGL2_CVBL9	1259-1280		
			PVGLC_H5VBC	475-494		PVGL8_EBV	732-752		PVGL2_CVBLY	1259-1280		
			PVGLG_CHAV	436-455		PVGLB_HCMVA	750-770		PVGL2_CVBM	1259-1280		
			PVGLG_RABVH	372-391		PVGL8_HCMVT	751-771		PVGL2_CVBQ	1259-1280		
			PVGLI_H5VE5	44-63		PVGL8_H5V23	79-99		PVGL2_CVBV	1259-1280		
			PVGLI_VZVD	278-297		PVGL8_H6V2H	79-99		PVGL2_CVM4	1317-1338		
			PVGLM_BUNGE	117-136		PVGL8_H5V29	66-86		PVGL2_CVMA5	1265-1286		
			PVGLM_PHV	152-171		PVGL8_H6V6U	72-92		PVGL2_CVMJH	1176-1197		
			PVGLM_PTPV	997-1016		PVGL8_H5VB2	279-299		PVGL8_H6V11	83-104		
			PVGLM_PUUMH	155-174		PVGL8_H6V6A	63-83		PVGL8_H6V1F	82-103		
			PVGLM_PUUM5	155-174		PVGL8_MCMV6	738-758		PVGL8_H6V1K	82-103		
			PVGLM_RVFV	830-849		PVGLF_PI3H4	283-303		PVGL8_H6V1P	83-104		
			PVGLM_RVFVZ	830-849		PVGLG_RABVE	454-474		PVGL8_MCMV5	135-155		
			PVGLM_UUK	655-674		PVGLG_RABVH	454-474		PVGLC_PRVIF	448-467		
			PVGLY_LYCVW	89-108		PVGLG_RABVP	454-474		PVGLF_CDVO	338-357		
			PVQN8_CPMV	1165-1184		PVGLG_RABV8	454-474		PVGLF_MEA6E	224-245		
			PVM3_REOVD	521-540		PVGLG_RABVT	454-474		PVGLF_MEA6I	227-248		
			PVME1_CVBM	171-190		PVGLH_MCMV6	670-690		PVGLF_M6A6Y	224-245		
			PVME1_CVH22	136-155		PVGLM_BUNL7	1326-1346		PVGLF_MUMPM	446-467		
			PVME1_CVPF5	174-193		PVGLM_BUN5H	1326-1345		PVGLF_MUMPR	446-467		
			PVME1_CVPPU	174-193		PVGLM_BUNYW	996-1016		PVGLF_MUMP5	446-467		
			PVME1_CVPRM	174-193		PVGLM_HANTB	999-1019		PVGLF_PHODV	305-326		
			PVME1_CVTKE	171-190		PVGLM_HANTH	1000-1020		PVGLF_PI1HC	456-477		
						PVGLM_HANTL	1001-1021		PVGLF_PI2H	450-471		
						PVGLM_HANTV	1001-1021		PVGLF_PI2HG	450-471		
						PVGLM_RVFVZ	1166-1176		PVGLF_PI2HT	450-471		
						PVGLM_SEOUR	1000-1020		PVGLF_PI3B	405-426	453-474	

						PVGLM_GEOUS	999-1019		PVGLF_PI3H4	453-474					
						PVGLM_UUK	926-945		PVGLF_RINDK	220-241					
						PVGLY_LYCVA	12-32		PVGLF_RINDL	220-241					
						PVGLY_LYCVW	12-32		PVGLF_SENDB	460-481					
						PVGLY_PIARV	12-32		PVGLF_SENDF	460-481					
						PVGNB_CPMV	141-161		PVGLF_SENDH	460-481					
						PVMAT_MUMPS	310-330		PVGLF_SENDJ	460-481					
						PVMAT_NDVA	309-329		PVGLF_SENDZ	460-481					
						PVMAT_NDVB	309-329		PVGLF_SV41	453-474					
						PVMAT_PI2HT	308-328		PVGLF_SV5	446-467					
						PVMAT_PI4HA	312-332		PVGLH_HCMVA	691-712					
						PVMAT_PI4HB	312-332		PVGLH_HCMVT	690-711					
						PVMAT_SV41	308-328		PVGLH_H6VE4	304-325					
						PVMAT_SV5	308-328		PVGLH_H6VE6	297-318					
						PVME1_IBV6	74-94		PVGLH_H6V6A	668-679					
						PVME1_IBVB	74-94		PVGLI_H6V2	2-23					
						PVME1_IBVB2	74-94		PVGLI_H3V23	2-23					
						PVME1_IBVK	74-94		PVGLM_BUNGE	197-218					
						PVM9A_HPBDB	201-221		PVGLM_BUNL7	190-211					
						PVMSA_HPBG6	209-229		PVGLM_BUNSH	190-211					
						PVM9A_HPBHE	293-313		PVGLM_BUNYW	193-214					
						PVM9A_WHV1	207-227		PVGLY_LA66G	237-258					
						PVM9A_WHV59	212-232		PVGLY_LA66J	238-259					
						PVM8A_WHV7	212-232		PVGPB_EBV	67-88					
						PVM9A_WHV8	212-232		PVM01_VACCC	281-302					
						PVM8A_WHV81	212-232		PVM01_VACCV	230-251					
						PVM9A_WHVW8	63-83		PVMAT_HR3VA	189-160					
									PVMAT_RINDK	200-221	239-260				
									PVMAT_TRTV	122-143					
									PVME1_CVHOC	64-85					
									PVM8A_HPBD8	201-222					
									PVM8A_HPBV0	70-91					
									PVM8A_HPBV2	244-265					
									PVM8A_HPBV4	244-265					
									PVM8A_HPBV9	244-265					
									PVM9A_HPBVA	233-254					
									PVM8A_HPBVD	70-91					
									PVM8A_HPBVI	233-254					
									PVM9A_HPBVJ	233-254					
									PVM8A_HPBVL	233-254					
									PVM8A_HPBVN	70-91					
									PVM8A_HPBVO	233-254					
									PVM8A_HPBVP	244-265					
									PVM8A_HPBVR	244-265					
									PVM8A_HPBV9	70-91					
									PVM8A_HPBVW	233-254					
									PVM9A_HPBVY	233-254					

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PVM9A_HPBV2	233-264
PVMT2_IAANN	26-46
PVMT2_IABAN	26-46
PVMT2_IAFOW	26-46
PVMT2_IAFPR	26-46
PVMT2_IAFPW	26-46
PVMT2_IALE1	26-46
PVMT2_IALE2	26-46
PVMT2_IAMAN	26-46
PVMT2_IAPUE	26-46
PVMT2_IABIN	26-46
PVMT2_IAUDO	26-46
PVMT2_IAWIL	26-46

TABLE XII

Search Results Summary for P7CTLZIP, P8CTLZIP, and P9CTLZIP Motifs

P7CTLZIP			P8CTLZIP			P8CTLZIP					
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE					
PENV_8AEVM	202-224		PENV1_FR9FV	380-403		PENV_8LVAF	303-327				
PENV_HV1B1	498-520		PENV2_FR6FV	380-403		PENV_8LVAU	303-327				
PENV_HV1B8	493-516		PENV_8IV06	178-201		PENV_8LVAV	303-327				
PENV_HV1BN	494-516		PENV_8IV27	207-230		PENV_8LVB2	303-327				
PENV_HV1BR	503-526		PENV_FOAMV	664-687		PENV_8LVBG	303-327				
PENV_HV1EL	496-517		PENV_HV123	176-198		PENV_8LVJ	303-327				
PENV_HV1H2	498-520		PENV_HV28E	3-26	781-804	PENV_FIVPE	781-805				
PENV_HV1H3	498-520		PENV_HV2CA	750-773		PENV_FIVSD	779-803				
PENV_HV1J3	510-532		PENV_HV2D1	3-26	772-795	PENV_FIVT2	780-804				
PENV_HV1JR	490-512		PENV_HV2Q1	772-795		PHEMA_CVBLY	391-415				
PENV_HV1KB	504-526		PENV_HV2NZ	777-800		PHEMA_CVBM	391-415				
PENV_HV1MA	500-522		PENV_JSRV	541-564		PHEMA_CVBQ	391-415				
PENV_HV1MF	496-518		PENV_8FV1	664-687		PHEMA_CVHOC	391-415				
PENV_HV1ND	488-510		PENV_8FV3L	661-684		PHEMA_INCCA	442-466				
PENV_HV1PV	498-520		PENV_8IVM1	803-826		PHEMA_INCEN	430-454				
PENV_HV1S1	489-511		PENV_8IVMK	802-825		PHEMA_INCGL	430-454				
PENV_HV1Z2	123-146	496-517	PENV_8IVML	801-824		PHEMA_INCHY	429-453				
PENV_HV1Z8	497-519		PENV_8IV84	806-829		PHEMA_INCJH	443-467				
PENV_HV1Z8	506-527		PENV_8IV9P	810-833		PHEMA_INCKY	429-453				
PENV_HV1ZH	498-520		PHEMA_CDVO	200-223		PHEMA_INCMI	429-453				
PENV_J8RV	376-398		PHEMA_PI2H	65-88		PHEMA_INCNA	429-453				
PENV_MPMV	213-235		PHEMA_PI2HT	65-88		PHEMA_INCP1	430-454				
PENV_8RV1	213-235		PVF11_VACCC	161-184		PHEMA_INCP2	430-454				
PHEMA_IAAIC	37-59		PVF15_VACCC	26-48		PHEMA_INCP3	430-454				
PHEMA_IABAN	21-43		PVP15_VACCP	3-26		PHEMA_INCTA	430-454				
PHEMA_IADA3	37-59		PVG1L_AMEPV	313-336		PHEMA_INCYA	430-454				
PHEMA_IADH2	21-43		PVG28_H8VI1	491-514		PHEMA_MUMPM	101-125				
PHEMA_IADH3	21-43		PVG43_H8VI1	322-345		PHEMA_MUMPR	101-125				
PHEMA_IADH4	21-43		PVG52_H8VI1	229-252		PHEMA_MUMPS	101-125				
PHEMA_IADH8	21-43		PVG87_H8VI1	722-746		PHEMA_PI1HW	29-53				
PHEMA_IADH9	21-43		PVGL2_CVBF	10-33		PVENV_BEV	62-86				
PHEMA_IADH7	21-43		PVGL2_CVBL9	661-674		PVF05_VACCC	280-304				
PHEMA_IADM2	37-59		PVGL2_CVBLY	10-33		PVF05_VACCP	280-304				
PHEMA_IADMA	28-50		PVGL2_CVM4	1267-1290		PVF05_VACCV	281-305				
PHEMA_IADU3	37-59		PVGL2_CVMA5	1215-1238		PVF09_VACCC	176-200				
PHEMA_IAEN6	21-43		PVGL2_CVMJH	1126-1149		PVF09_VACCV	176-200				
PHEMA_IAEN7	37-59		PVGL2_CVPF8	1274-1297		PVG01_VZVD	58-82				
PHEMA_IAMA0	37-59		PVGL2_CVPPU	1272-1295		PVG10_H8V8A	355-379				
PHEMA_IAME1	37-59		PVGL2_CVPR8	1060-1073		PVG12_H8V9A	68-92				
PHEMA_IAME2	37-59		PVGL2_CVPRM	1060-1073		PVG19_H8VI1	88-112				
PHEMA_IAME6	21-43		PVGL2_FIPV	1277-1300		PVG28_H3VI1	173-197				
PHEMA_IANT6	37-59		PVGL2_I8V6	196-219		PVG43_H6VI1	109-133				
PHEMA_IAQU7	21-43		PVGL2_I8VB	195-218		PVG87_H6VI1	108-132	1005-1029			
PHEMA_IATKM	33-55		PVGL2_I8VD2	196-219		PVG72_H6VI1	720-744				
PHEMA_IAUDO	37-59		PVGL2_I8VD3	196-219		PVGF1_I8VB	3001-3025				

PHEMA_IAVI7	38-60		PVGL2_IBVK	196-218		PVGLB_H3VMD	589-613				
PHEMA_IAX31	37-59		PVGL2_IBVM	196-218		PVGLB_ILTVB	597-621				
PHEMA_IAZCO	37-59		PVGL2_IBVU1	178-201		PVGLB_ILTV9	607-631				
PHEMA_IAZH2	21-43		PVGL2_IBVU2	178-201		PVGLB_ILTVT	607-631				
PHEMA_IAZH3	21-43		PVGL2_IBVU3	178-201		PVGLE_H3V11	413-437				
PHEMA_IAZUK	37-59		PVGLB_HCMVA	535-558		PVGLE_VZVD	469-493				
PHEMA_PHODV	38-58		PVGLB_HCMVT	536-559		PVGLF_SV5	401-425				
PHEMA_PI2H	66-87		PVGLB_H8V8A	483-506		PVGLH_HCMVA	574-598				
PHEMA_PI2HT	66-87		PVGLB_MCMV8	500-589		PVGLH_HCMVT	573-597				
PVFP7_CAPVK	89-111		PVGLC_H8V11	467-490		PVGLH_H8V11	443-467	603-627			
PVFU8_VACC8	72-94		PVGLC_H3V1K	467-490		PVGLH_H3V1E	443-467	603-627			
PVG01_H8VI1	317-339		PVGLC_H8V2	435-458		PVGLM_8UNL7	31-55				
PVG03_VACCC	60-72		PVGLC_H3V23	436-459		PVGLM_8UN3H	31-55				
PVG03_VARV	60-72		PVGLM_8UNL7	1387-1410		PVGLM_HANTH	694-718				
PVG04_VACCC	11-33		PVGLM_8UN3H	1387-1410		PVGLM_RVFV	344-368				
PVG04_VARV	11-33		PVGLM_UUK	966-989		PVGLM_RVFVZ	344-368				
PVG10_H3VI1	88-110		PVGLY_JUNIN	12-35		PVGLM_UUK	561-585				
PVG28_H8VI1	173-195		PVGLY_LA88O	12-35		PVGNM_CPMV	311-335				
PVG29_H8VI1	20-42		PVGLY_LA89J	12-35		PVGP2_EBV	657-681				
PVG40_H8VI1	134-156		PVGLY_LYCVA	12-35		PVGP3_EBV	854-878				
PVG48_H3V8A	71-93		PVGLY_LYCVW	12-35		PVM1_REOVD	280-304				
PVG58_H8V8A	266-288		PVGLY_MOPEI	12-35		PVM1_REOVL	280-304				
PVG59_H8VI1	267-289		PVGLY_TACV	12-35		PVM21_REOVD	168-192				
PVG5_8PV4	42-64		PVGLY_TACV5	12-35		PVM22_REOVD	168-192				
PVG60_H3VI1	53-75		PVGLY_TACV7	12-35		PVM2_REOVJ	168-192				
PVG65_H8VI1	1347-1369		PVGLY_TACVT	12-35		PVM2_REOVL	168-192				
PVG8_8PV1R	60-82		PVGNM_CPMV	741-764		PVMAT_MEASI	87-111				
PVGL2_IBV8	1056-1078		PVM1_REOVD	324-347	454-477	PVMAT_85PVB	314-338				
PVGL2_IBVB	1055-1077		PVM1_REOVL	454-477		PVME1_CVBM	137-161				
PVGL2_IBVD2	1056-1078		PVMAT_MUMPS	227-250		PVME1_CVHOC	137-161				
PVGL2_IBVK	1056-1077		PVM3A_HPBD8	269-292		PVME1_CVTKE	137-161				
PVGL2_IBVM	1056-1077		PVM8A_HPBDC	268-291		PVME1_IBV8	74-98				
PVGLB_H8V8U	117-139		PVM3A_HPBDU	231-254		PVME1_IBVB	74-98				
PVGLB_H8VB2	746-767		PVM8A_HPBDW	269-292		PVME1_IBVB2	74-98				
PVGLC_H8VM8	399-421		PVM3A_HPBHE	236-259		PVME1_IBVK	74-98				
PVGLC_H8VMG	398-420					PVM8A_HPBG8	271-295				
PVGLC_H8VMM	399-421					PVM8A_WHV1	200-223				
PVGLF_8R8VA	265-287	482-504				PVM8A_WHV69	274-298				
PVGLF_8R8VC	484-508					PVM3A_WHV7	274-298				
PVGLF_8R8VR	484-508					PVM3A_WHV8	274-298				
PVGLF_HR8V1	484-508					PVM3A_WHV8I	274-298				
PVGLF_HR8VA	484-508					PVM3A_WHVW8	126-149				
PVGLF_HR8VL	484-508										
PVGLF_HR8VR	484-508										
PVGLF_TR8V	462-474										
PVGLG_8HV	77-99										
PVGLG_VH8V0	406-428										

PVGLH_HSVE4	614-636										
PVGLH_HSVE8	607-629										
PVGLI_HCMVA	166-180										
PVGLM_PTPV	743-765										
PVGLP_BEV	430-462	1540-1568									
PVGLY_LASSG	426-448										
PVGLY_LASSJ	427-449										
PVGLY_MOPEI	426-447										
PVGP2_EBV	657-679										
PVGP3_EBV	654-676										
PVM1_REOVD	414-436										
PVM1_REOVL	414-436										
PVM3_REOVD	304-326										
PVMAT_P11HC	195-217										
PVMAT_P12HT	132-154										
PVMAT_SENDF	195-217										
PVMAT_SENDH	195-217										
PVMAT_SENDZ	195-217										
PVMAT_SV41	132-154										
PVMEM_EBV	131-153										
PVMP_CERV	293-315										

TABLE XIII

SEARCH RESULTS SUMMARY FOR P12LZIPC MOTIF

PCGENE	P12CTL2IP
FILE NAME	PROTEIN
P194K_TRVSY	POTENTIAL 194 KD PROTEIN
P3BIIS_VACCC	3BETA-HSD
P3BIIS_VACCV	3BETA-HSD
P3BIIS_VARV	3BETA-HSD
PATIII_FOWPV	ANTITHROMBIN-III HOMOLOG
PATII_VACCV	94 KD A-TYPE INCLUSION PROTEIN
PATII_VARV	81 KD A-TYPE INCLUSION PROTEIN
PATI2_HSV11	UL46
PATI2_HSV1F	UL46
PATI2_HSVED	ALPHA TRANS-INDUCING FACTOR 82 KD PROTEIN
PATI2_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN
PATI2_VZVD	ALPHA TRANS-INDUCING FACTOR 74 KD PROTEIN
PATI3_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN
PATIN_HSVBP	ALPHA TRANS-INDUCING PROTEIN
PATIN_HSVE4	ALPHA TRANS-INDUCING PROTEIN
PATIN_HSVEB	ALPHA TRANS-INDUCING PROTEIN
PATIN_VZVD	ALPHA TRANS-INDUCING PROTEIN
PATI_COWPX	A-TYPE INCLUSION PROTEIN
PB2_BBV	B2 PROTEIN
PB701_HSV6D	TRANSCRIPTIONAL REGULATORY PROTEIN
PBCRF_EBV	BCRF1 PROTEIN PRECURSOR
PBRLI_EBV	TRANSCRIPTION ACTIVATOR BRLF1
PCAJ01_VACCC	CELL SURFACE-BINDING PROTEIN
PCAJ01_VACCV	CELL SURFACE-BINDING PROTEIN
PCAJ1H_VARV	CELL SURFACE-BINDING PROTEIN
PCCPH_HSVSA	COMPL CONTROL PROTEIN HOMOLOG PREC
PCELF_HSV11	CELL FUSION PROTEIN PRECURSOR
PCELF_HSV1K	CELL FUSION PROTEIN PRECURSOR
PCELF_HSV2H	CELL FUSION PROTEIN PRECURSOR
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR
PCELF_VZVD	CELL FUSION PROTEIN PRECURSOR
PCGH2_HSVSA	CYCLIN HOMOLOG
PCOA1_BFDV	COAT PROTEIN VP1
PCOA1_POVBA	COAT PROTEIN VP1
PCOA1_POVBK	COAT PROTEIN VP1
PCOA1_POVBO	COAT PROTEIN VP1
PCOA1_POVHA	COAT PROTEIN VP1
PCOA1_POVJC	COAT PROTEIN VP1
PCOA1_POVLY	COAT PROTEIN VP1
PCOA1_POVMX	COAT PROTEIN VP1
PCOA1_SV40	COAT PROTEIN VP1
PCOA1_TTV1	COAT PROTEIN TP1
PCOA2_POVBO	COAT PROTEIN VP2
PCOA2_POVLY	COAT PROTEIN VP2
PCOA2_POVMO	COAT PROTEIN VP2
PCOA3_TTV1	COAT PROTEIN TP3
PCOAT_ABMVW	COAT PROTEIN
PCOAT_BOOLV	COAT PROTEIN PRECURSOR
PCOAT_CHVP1	MAJOR CAPSID PROTEIN
PCOAT_CLVK	COAT PROTEIN
PCOAT_CLVN	COAT PROTEIN
PCOAT_CMVSI	COAT PROTEIN
PCOAT_CNV	COAT PROTEIN
PCOAT_CSMV	COAT PROTEIN
PCOAT_CTV36	COAT PROTEIN
PCOAT_FCVC6	COAT PROTEIN
PCOAT_FCVF4	COAT PROTEIN

All Viruses (No Bacteriophages)

VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
TOBACCO RATTLE VIRUS (STRAIN SYM)	360-378	463-478	600-619	641-661	1011-1030	1299-1325	1385-1409		
VACCINIA VIRUS (STRAIN COPENHAGEN)	41-56	297-321							
VACCINIA VIRUS (STRAIN WR)	41-56	297-321							
VARIOLA VIRUS	41-56								
FOWLPOX VIRUS (ISOLATE HP 438[SCHOPF])	47-69								
VACCINIA VIRUS (STRAIN WR)	387-410								
VARIOLA VIRUS	388-411								
HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	279-301								
HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	279-301								
EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	197-222								
VACCINIA VIRUS (STRAIN COPENHAGEN)	215-241								
VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-79	377-397							
VACCINIA VIRUS (STRAIN WR)	47-71								
BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	101-120	277-292							
EQUINE HERPESVIRUS TYPE 4	104-123								
EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	129-148								
VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	203-220								
COWPOX VIRUS	389-412	1102-1128							
BLACK BEETLE VIRUS	31-52								
HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	55-78								
EPSTEIN-BARR VIRUS (STRAIN B95-8)	96-123								
EPSTEIN-BARR VIRUS (STRAIN B95-8)	16-32	200-224							
VACCINIA VIRUS (STRAIN COPENHAGEN)	188-203								
VACCINIA VIRUS (STRAIN WR)	188-203								
VARIOLA VIRUS	188-203								
HERPESVIRUS SAIMIRI (STRAIN 11)	326-348								
HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	178-196	232-238	286-309						
HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	178-196	232-238							
HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	178-196	232-238	285-309						
HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	205-223	249-268							
VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	246-269								
HERPESVIRUS SAIMIRI (STRAIN 11)	35-61	216-242							
BUDGERIGAR FLEDGLING DISEASE VIRUS	93-110								
POLYOMAVIRUS BK (STRAIN AS)	25-52	97-123	233-251						
POLYOMAVIRUS BK	25-52	97-123	233-251						
BOVINE POLYOMAVIRUS	96-120								
HAMSTER POLYOMAVIRUS	16-43								
POLYOMAVIRUS JC	17-44	89-115	225-243						
LYMPHOTROPIC POLYOMAVIRUS	97-123								
MOUSE POLYOMAVIRUS (STRAIN KILLIAM)	142-160	231-249							
SIMIAN VIRUS 40	27-44	99-125	235-253						
THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	80-103								
BOVINE POLYOMAVIRUS	77-104								
LYMPHOTROPIC POLYOMAVIRUS	79-102								
MOUSE POLYOMAVIRUS (STRAIN 3)	205-226								
THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	33-55								
ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	148-171								
BOOLARRA VIRUS	383-401								
PARAMECIUM BURSARIA CHLORELLA VIRUS 1	364-387	392-409							
CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	165-188								
CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	165-188								
CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	58-76								
CUCUMBER NECROSIS VIRUS	19-42								
CITRUS STRIATE MOSAIC VIRUS	219-238								
CITRUS TRISTEZA VIRUS (ISOLATE T36)	72-94								
FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	564-587	642-664							
FELINE CALICIVIRUS (STRAIN JAPANESE F4)	564-587	642-657							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
TITLENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCOAT_FCV19	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	567.590	645.660							
PCOAT_FPV	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS	690.701								
PCOAT_FPV19	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS (STRAIN 19)	690.701								
PCOAT_HEVS	COAT PROTEIN	HELENIUM VIRUS S	47-66								
PCOAT_MEVA	COAT PROTEIN VP1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	685.700								
PCOAT_MNSV	COAT PROTEIN	MELON NECROTIC SPOT VIRUS	13.53								
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	176.197	204.237							
PCOAT_NMV	COAT PROTEIN	NARCISSUS MOSAIC VIRUS	67.86								
PCOAT_NODAV	COAT PROTEIN PRECURSOR	NODAMURA VIRUS	376.394								
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	104.110								
PCOAT_OYMV	COAT PROTEIN	ONONIS YELLOW MOSAIC VIRUS	33.92								
PCOAT_PAVC1	COAT PROTEIN VP1	CANINE PARVOVIRUS (TYPE 2 / STRAIN A22)	547.562								
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN 780929)	685.700								
PCOAT_PAVCD	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN CPV-D CORNELL 130)	700.715								
PCOAT_PAVCN	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN P)	711.726								
PCOAT_PEMV	COAT PROTEIN PRECURSOR	PEPPER MOTTLE VIRUS	223.289								
PCOAT_PMV	COAT PROTEIN	PAPAYA MOSAIC POTEXVIRUS	85.103								
PCOAT_PPMV3	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	64.84	101.139							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	129.147								
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	128.152								
PCOAT_SMVMLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	51.67								
PCOAT_SMYEA	COAT PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	57.72								
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	222.237								
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN BS-1)	359.381								
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	73.89								
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	154.173								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	102.128								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	102.128								
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN 06)	102.128								
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DARLEMENSE)	102.128								
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	102.128								
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN HOLMES RIBGRASS (HR))	102.128								
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O)	102.128								
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	102.128								
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO)	102.128								
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	119.142								
PCOAT_TNVD	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D)	108.114								
PCOLL_HSV3C	COLLAGEN-LIKE PROTEIN	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	71.96								
PCORA_HPBV2	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADW2)	79.100								
PCORA_HPBVA	CORE ANTIGEN	HEPATITIS B VIRUS (STRAIN ALPHA1)	15.31								
PCORA_HPBVZ	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADYW)	79.100								
PDNBI_ADE02	PROBABLE DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	71.93								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	649.473								
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	681.788								
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	459.476	597.620							
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	459.476	597.620							
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	459.476	597.620							
PDNBI_HSV82	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BA1V)	455.472	596.616							
PDNBI_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAY)	810.811								
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	108.127	610.629	869.887	974.1090					
PDNBI_MCMV3	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	617.684								
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	188.212	641.670							
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	269.294								
PDPOL_ADE03	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 3	264.281	328.810							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	264.281	328.810							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	331.350	494.517	894.916						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	262.281	563.581	836.848						

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	410-454	654-678	732-757						
PDPOL_CHVNJ	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	424-442								
PDPOL_CHVPI	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	153-172	424-442							
PDPOL_EBV	DNA POLYMERASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	354-374	418-463	524-542	667-687	973-990				
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	60-77	220-247							
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	569-587	945-960	1029-1045						
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 55)	4-29	157-174	522-541	554-572					
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	4-29	157-174	521-540	553-571					
PDPOL_HPBDU	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	181-200	243-261							
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE 51)	4-29	157-174	522-541	554-572					
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	448-475								
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	4-29	554-572							
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW2)	412-439	447-463	761-780						
PDPOL_HPBV4	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR4)	410-437								
PDPOL_HPBV9	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	412-439	447-463	761-780						
PDPOL_HPBVA	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN ALPHA1)	80-96	399-426	434-450	750-769					
PDPOL_HPBVI	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW470)	80-96	410-437	445-468	761-778					
PDPOL_HPBVJ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PJDW311)	80-96	410-437	445-468	761-778					
PDPOL_HPBVL	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE)	80-96	399-426	434-457	750-767					
PDPOL_HPBVM	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR / MUTANT)	80-96	410-437	761-777						
PDPOL_HPBVO	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PJDW282)	80-96	410-437	445-468	761-778					
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PJDW294)	412-439	447-463							
PDPOL_HPBVR	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR)	80-96	410-437	761-778						
PDPOL_HPBVW	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW)	82-98	405-432	440-456						
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	80-96	399-426	434-457	750-767					
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	80-96	399-426	434-457						
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	797-817	877-897	1073-1090						
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	797-817	877-897	1073-1090						
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	797-817	877-897	1073-1090						
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	797-817	877-897	1073-1090						
PDPOL_HSV21	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	802-822	882-902	1078-1095						
PDPOL_HSV6U	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	652-672	786-801	858-882						
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AR4P)	283-299	377-392	454-477	798-818	878-898				
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	257-275	397-418							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	118-137	297-319	344-364	514-532	955-972				
PDPOL_MCMVS	DNA POLYMERASE	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	303-322	535-553	780-802						
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	518-536	676-697							
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	421-437								
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-331	363-382	440-463	713-740	757-781	1006-1024			
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	446-473								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	451-478								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	451-478								
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	450-477	554-571							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	451-478								
PDPOL_WHVW6	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS23)	123-150								
PDPOM_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	399-426	434-450	750-767						
PDUT_HCMVA	DUTPASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-126								
PDUT_HSVE4	DUTPASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	130-154								
PDUT_HSVEB	DUTPASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AR4P)	130-149								
PDUT_HSVI1	DUTPASE	ICTALURID HERPESVIRUS 1	72-95								
PDUT_HSVSA	DUTPASE	HERPESVIRUS SAIMIRI (STRAIN 11)	22-45	79-104	168-181						
PE1I1_ADEM1	EARLY E1A 11 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	24-47								
PE1A6_ADE07	EARLY E1A 6.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	8-35								
PE1A_ADE04	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 4	104-120								
PE1A_ADE07	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	8-35								
PE1A_ADES7	EARLY E1A 28 KD PROTEIN	SIMIAN ADENOVIRUS TYPE 7	173-189	238-254							
PE1BL_ADE12	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	451-467								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PE1BL_ADEC2	E1B PROTEIN, LARGE T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	101-122								
PE1BL_ADENT	EARLY E1B 44 KD PROTEIN	TUPAIA ADENOVIRUS	75-101								
PE1BS_ADEC2	E1B PROTEIN, SMALL T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	55-77								
PE1BS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	118-138								
PE3I0_ADE02	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 2	3-31	34-60							
PE3I0_ADE05	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	3-31	33-60							
PE3I0_ADE07	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	3-34								
PE3I1_ADE02	EARLY E3A 11 6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 2	27-53								
PE3I1_ADE01	EARLY E3 9 0 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 1	19-45								
PE3I1_ADE05	EARLY E3A 10 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	20-46								
PE3I1_ADE07	EARLY E3 7 7 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	36-62								
PE3I4_ADE05	EARLY E3 14 5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	108-125								
PE3I5_ADE01	EARLY E3B 14 5 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 1	52-72								
PE3I5_ADE07	EARLY E3B 14 9 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	52-72								
PE3I6_ADE01	EARLY E3 16 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 1	102-125								
PE3I1_ADE01	EARLY E3 20 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 1	146-167								
PE3I1_ADE07	EARLY E3 20 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 7	146-167								
PE3I2_ADEC1	EARLY E3 22 2 KD GLYCOPROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	155-177								
PE3GL_ADEM1	EARLY E3 17 7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	105-127								
PE4I1_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	56-77								
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	56-77								
PE4I1_ADEM1	PROBABLE EARLY E4 33 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	61-80								
PE4I4_ADE02	EARLY E4 34 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	80-106								
PEAD_EBV	EARLY ANTIGEN PROTEIN D	EPSTEIN-BARR VIRUS (STRAIN B95-8)	263-286								
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-184								
PEBN2_EBV	EBNA-2 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	126-141								
PEBN3_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	111-131	662-683							
PEFT1_VARV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	21-41								
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV_AVIRJ	ENV POLYPROTEIN	AVIAN RETROVIRUS RPL30	206-225								
PENV_AVISU	COAT PROTEIN GP37	AVIAN SARCOMA VIRUS (STRAIN UR2)	98-117								
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	170-190	202-224							
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	47-68	178-201	434-450	525-546					
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	47-68	147-168	207-230	463-479	554-575				
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	303-327								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	303-327								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	303-327								
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	303-327								
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	303-327								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	303-327								
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	630-651						
PENV_FIVPE	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	630-651						
PENV_FLVC6	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	38-55	624-643							
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	9-29	447-468	NOT A26						
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	467-488	625-646							
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	444-465	602-623							
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	153-174	255-275	100-125	481-496	710-727	864-887	924-951	957-978	
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	467-488	625-646							
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	447-468	605-626							
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	450-471	608-629							
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	467-488								
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	519-540								
PENV_HVIB1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NIH10 ISOLATE)	498-520								
PENV_HVIB8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (D1I8 ISOLATE)	493-515								
PENV_HVIBN	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	494-516								
PENV_HVIBR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	503-525								

PCGENE	P11CYL21P	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PENV_HVIC4	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ICRC45 ISOLATE)	429-448								
PENV_HVIEL	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	495-517								
PENV_HVIH2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	498-520								
PENV_HVIH1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB1 ISOLATE)	498-520								
PENV_HVIJ	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH1 ISOLATE)	510-533								
PENV_HVIR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	490-512								
PENV_HVIKB	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	504-526	532-579	765-788						
PENV_HVIMA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	500-522								
PENV_HVIMF	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	496-518								
PENV_HVINS	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	178-203								
PENV_HVIND	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	488-510								
PENV_HVIOY	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	123-140								
PENV_HVIPV	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	498-520								
PENV_HVIRJ	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HTLV-IIIB ISOLATE)	445-460								
PENV_HVISI	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	489-511	538-554							
PENV_HVIS3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	500-522								
PENV_HVIZ2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	123-145	410-427	495-517						
PENV_HVIZ3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	117-133	175-198							
PENV_HVIZ6	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	497-519								
PENV_HVIZ8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	505-527								
PENV_HVIZH	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	123-142	438-453	498-520						
PENV_HV2BE	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	3-26	750-775	781-804						
PENV_HV2CA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	750-777								
PENV_HV2D1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	3-26	741-766	772-795						
PENV_HV2D2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9-28								
PENV_HV2GI	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	741-766	772-795							
PENV_HV2NZ	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	742-767	777-800							
PENV_HV2RO	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	751-776								
PENV_HV2SB	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	743-768	778-804							
PENV_HV2ST	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	745-770								
PENV_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	104-119	299-325	376-398	541-564					
PENV_MCFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	600-621								
PENV_MCFFJ	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	601-622								
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	630-651								
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	625-646								
PENV_MLVF5	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	639-660								
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD29)	639-660								
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	639-660								
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOMULV MURINE LEUKEMIA VIRUS (MULV-HOKITULANUS VIRUS)	626-647								
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	167-188								
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	629-650								
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	624-645								
PENV_MLVRK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	624-645								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	643-663								
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	643-663								
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	213-235								
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	170-191								
PENV_OMVVS	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	638-681								
PENV_RMCFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	603-624								
PENV_RSVP	ENV POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	42-69	533-552							
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	300-325	710-727	864-887	924-951	957-978				
PENV_SFVJL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK1)	157-178	304-329	707-724	861-884	921-948	954-975			
PENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	437-458								
PENV_SIVAG	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	442-463								
PENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	421-442								
PENV_SIVAT	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	435-456								
PENV_SIVGB	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	91-109								

PCGENE	P1ICTLZIP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PENV_SIVM1	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	766-793	803-826							
PENV_SIVK6X	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	139-154	765-792	802-825						
PENV_SIVK6L	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	139-154	764-791	801-824						
PENV_SIVS4	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)	769-789	806-829							
PENV_SIVSP	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBJMC11 ISOLATE)	773-793	810-833							
PENV_SMSAV	PISE PROTEIN	SIMIAN SARCOMA VIRUS	42-63								
PENV_SRVI	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	211-235								
PERBA_AVIER	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	227-249								
PETF1_FOWPI	EARLY TRANSCRIPTION FACTOR	FOWLPOX VIRUS (STRAIN FP-1)	21-41	73-92							
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR	SHOPE FIBROMA VIRUS (STRAIN KASZA)	21-41								
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-41								
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN WR)	21-41								
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	50-73	101-117	165-187	285-308	558-582				
PETF2_VACCV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	48-72								
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	50-73	101-117	165-187	285-308	558-582				
PEXON_HSV11	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	165-180								
PEXON_HSV2	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 2)	155-170								
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	276-291								
PEXON_PRVNI	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-1)	36-51								
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	28-44	217-234							
PFIB3_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	116-133								
PFIB3_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	116-133								
PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	152-171								
PFIBP_ADE05	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 5	447-473								
PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3 (MASTADENOVIRUS HOST)	347-372	775-801							
PFIBP_ADEC1	FIBER PROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLASGOW)	382-397								
PFIBP_ADEM1	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	191-215	227-253	491-513	548-574	579-599				
PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	53-78								
PGAG_AVSV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	2-27								
PGAG_AVIMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	53-78								
PGAG_AVIMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1181	53-78								
PGAG_AVISU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	53-78								
PGAG_AVISY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	53-78								
PGAG_BAEVM	GAG POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	397-422								
PGAG_BLVAU	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	213-238								
PGAG_BLVJ	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	213-239								
PGAG_CAEVC	GAG POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	102-119								
PGAG_FUJSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	53-78								
PGAG_HTL1A	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	77-94								
PGAG_HTL1C	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	77-94								
PGAG_HTL1M	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	77-94								
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	65-91								
PGAG_HV1B1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	65-91								
PGAG_HV1B5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	65-91								
PGAG_HV1BR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	65-91								
PGAG_HV1C4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	65-91								
PGAG_HV1EL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	65-91								
PGAG_HV1H2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	65-91								
PGAG_HV1J1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH1 ISOLATE)	65-91								
PGAG_HV1JR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	65-91								
PGAG_HV1MA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	262-285								
PGAG_HV1MN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	65-91								
PGAG_HV1N5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	65-91								
PGAG_HV1ND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	65-91	352-373							
PGAG_HV1OY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	65-91								
PGAG_HV1PV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	65-91								
PGAG_HV1RH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	65-91								

PCGENE	PRCTLZIP	All Viruses (No Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PGAG_HV1U4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISO	65-91								
PGAG_HV1W2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	65-91								
PGAG_HV122	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE/CDC-Z34 ISOLATE)	65-91								
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	757-772								
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN HRA)	82-97								
PGAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	82-97								
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	82-97								
PGAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	53-78								
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	618-645								
PGAG_SFVI	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	85-101								
PGAG_SFVJL	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LKO)	85-101								
PGAG_SIVA1	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	189-213								
PGAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1 ISOLATE)	193-217								
PGAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	189-213								
PGAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	66-92								
PGAG_SIVGB	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	66-92								
PGAG_SIVM1	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)									
PGAG_SMRVH	GAG POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	286-307								
PGLRX_VACCC	POSSIBLE GLUTAREDOXIN	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	71-87								
PGLRX_VARV	POSSIBLE GLUTAREDOXIN	VARIOLA VIRUS	71-87								
PGRAN_OVAS	GRANULIN	AGROTIS SEGETUM GRANULOSIS VIRUS	208-226								
PGRAN_OVTN	GRANULIN	TRICHOPLUSIA NI GRANULOSIS VIRUS	209-227								
PGRFA_VACCC	GROWTH FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-124								
PGRFA_VACCV	GROWTH FACTOR	VACCINIA VIRUS (STRAIN WR)	104-123								
PGRFA_VARV	GROWTH FACTOR	VARIOLA VIRUS	104-122								
PHELI_EBV	PROBABLE HELICASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	180-207	338-361	438-464						
PHELI_HCMVA	PROBABLE HELICASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	397-420	539-560	826-852						
PHELI_HSV11	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	389-408	628-646							
PHELI_HSV2H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	290-309	529-554							
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	181-204	243-266	394-413						
PHELI_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	327-350	389-411	658-683						
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	165-189	383-402	561-578	761-786					
PHEMA_CDVO	HEMAGGLUTININ-NEURAMINIDASE	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	36-53	200-223							
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	391-415								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	391-415								
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	391-415								
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC), AND (STRAIN L9)	391-415								
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	391-415								
PHEMA_CVMA5	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	402-423								
PHEMA_CVMS	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN S)	403-418								
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	37-59	322-339							
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	21-43	306-323							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	320-337								
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	320-337								
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	81-101	231-247	316-333						
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	302-319								
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/83)	302-319								
PHEMA_IACKS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	319-336								
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	230-246	315-332							
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	320-337								
PHEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	37-59	322-339							
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	320-337								
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	266-287	319-336							
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	306-323								
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	21-43	306-323							
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	21-43	306-323							
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	21-43	306-323							

PCGENE	PIR:TLZIP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PIRMA_IADH5	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	21-41	215-337							
PIRMA_IADH6	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/63)	21-41	106-323							
PIRMA_IADH7	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/63)	21-41	106-323							
PIRMA_IADMJ	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	17-39	322-339							
PIRMA_IADMA	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	28-50	81-101							
PIRMA_IADN2	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	320-337								
PIRMA_IADU3	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	17-39	322-339							
PIRMA_IAEN6	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/878/69)	21-43	106-323							
PIRMA_IAEN7	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77)	17-39	322-339							
PIRMA_IAFR	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/RUSSTOCK/34)	320-346	315-332							
PIRMA_IAGRE	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	320-337								
PIRMA_IAGU1	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/LANDY/704/77)	320-337								
PIRMA_IAGUA	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GUIZLAS/TRAKHAN/22/764)	319-336								
PIRMA_IAHA1	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	321-338								
PIRMA_IAHK3	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	320-346	315-332							
PIRMA_IAHC1	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/77)	320-346	315-332							
PIRMA_IAHCD	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	320-346	315-332							
PIRMA_IAHD5	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	320-346	315-332							
PIRMA_IAHF0	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	336-352	321-338							
PIRMA_IAHK4	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/0/86)	321-338								
PIRMA_IAHK7	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	336-352	321-338							
PIRMA_IAHLE	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	320-346	315-332							
PIRMA_IAHLO	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	320-346	315-332							
PIRMA_IAHM0	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	336-352	321-338							
PIRMA_IAHNM	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	336-352	321-338							
PIRMA_IAHNN	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	315-332								
PIRMA_IAHPR	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	315-332								
PIRMA_IAHR0	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/50)	336-352	321-338							
PIRMA_IAHSA	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	336-352	321-338							
PIRMA_IAHSP	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	320-346	315-332							
PIRMA_IAHSW	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/72)	320-346	315-332							
PIRMA_IAHTE	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	336-352	321-338							
PIRMA_IAHTO	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/1/)	336-352	321-338							
PIRMA_IAHUR	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	336-352	321-338							
PIRMA_IAJAP	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	333-354								
PIRMA_IAMAA	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	197-333	319-336							
PIRMA_IAMAB	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	207-328	324-341							
PIRMA_IAMAO	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	337-59	322-339							
PIRMA_IAME1	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	17-39	322-339							
PIRMA_IAME3	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	17-39	322-339							
PIRMA_IAMS6	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	21-43	306-323							
PIRMA_IAMN	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	63-101	231-247	116-133						
PIRMA_IANT6	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	17-39	322-339							
PIRMA_IAPIL	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/MAINE/2/84)	320-337								
PIRMA_IAQU7	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/7/0)	21-43	306-323							
PIRMA_IARUD	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47)	320-337								
PIRMA_IASE3	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	320-337								
PIRMA_IASH2	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	334-350	321-338							
PIRMA_IASTA	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/31/65)	320-346	315-332							
PIRMA_IATKM	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1/80)	331-55	320-337							
PIRMA_IATKO	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	213-349								
PIRMA_IATKR	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	336-348								
PIRMA_IATKW	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	229-245								
PIRMA_IAUDO	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	17-39	322-339	186-197						
PIRMA_IAVI7	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	18-60	323-340							
PIRMA_IAX01	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN X-31)	17-39								
PIRMA_IAZCO	IEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/77)	322-339								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PHEMA_IAZH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	21-43	306-321							
PHEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1126/82)	21-43	306-321							
PHEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKKEL/1/84)	37-59	322-339							
PHEMA_INBAA	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/86)	115-131	295-310							
PHEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	133-139	301-318							
PHEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/43)	116-132	293-308							
PHEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	133-139	301-316							
PHEMA_INBFU	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/FUKUOKA/10/81)	108-124	286-301							
PHEMA_INBGL	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/GL/54)	119-135	296-311							
PHEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	116-132	293-308							
PHEMA_INBIB	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/IBARAKI/2/85)	108-124	288-303							
PHEMA_INBID	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ID/86)	120-136	299-314							
PHEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	133-139	302-317							
PHEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	133-139	292-307							
PHEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	116-132	296-311							
PHEMA_INBNA	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/NAGASAKI/1/87)	108-124	288-303							
PHEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	133-139	301-316							
PHEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	133-139	301-316							
PHEMA_INBSJ	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	119-135	298-313							
PHEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	116-132	294-309							
PHEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/1/85)	116-132	296-311							
PHEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	133-139	303-318							
PHEMA_INBYB	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/16/88)	108-124	286-301							
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	442-466								
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	430-454								
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	430-454								
PHEMA_INCHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	429-453								
PHEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	443-467								
PHEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	429-453								
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	429-453								
PHEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NARA/82)	429-453								
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	430-454								
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	430-454								
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	430-454								
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	430-454								
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	430-454								
PHEMA_MUMP1	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1)	101-125	133-148	225-246	367-394	397-417				
PHEMA_MUMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	101-125	133-148	225-246	367-394	397-417				
PHEMA_MUMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	101-125	133-148	225-246	367-394	397-417				
PHEMA_MUMPS	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	101-125	133-148							
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	93-110								
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	93-110								
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	93-110								
PHEMA_NDVH4	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	93-110								
PHEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	93-110								
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	93-110								
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	93-110								
PHEMA_NDVTO	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS GB/48)	93-110								
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	93-110								
PHEMA_PIIODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	36-58	213-234	493-513						
PHEMA_PIIIIW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	29-53	322-342	345-360	486-503					
PHEMA_PI2II	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	13-40	65-88	118-136						
PHEMA_PI2HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	13-40	65-88	118-136						
PHEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	111-128	272-299	324-340						
PHEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	111-128	272-299	324-340						
PHEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/12854/74)	111-128	272-299	324-340						
PHEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	111-128	272-299	324-340						

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIEMA_PI3HU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	111-128	272-299	324 340						
PIEMA_PI3HV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12617/83)	111-128	272-299	324 340						
PIEMA_PI3HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/664/79)	111-128	272-299	324 340						
PIEMA_PI3HX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/15111/77)	111-128	272 299	324 340						
PIEMA_PI4HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	50-67								
PIEMA_RINDK	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KABETE O)	368-383								
PIEMA_RINDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	4-30								
PIEMA_SEND5	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN 7 / HOST MUTANTS)	122-142								
PIEMA_SENDI	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	122-142								
PIEMA_SENDI	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	122-142								
PIEMA_SEND2	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	122-142								
PIEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	55-73	85-102	107 132						
PIEMA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN W3)	7-28	84-101	379 400						
PIEMA_SV5CM	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CPI-)	7-28	84-101	379 400						
PIEMA_SV5CP	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CPI+)	7-28	84-101	379 400						
PIEMA_SV5LN	HEMAGGLUTININ-NEURAMINIDASE		7-28	84-101	379 400						
PIEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	173-192								
PIEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	173-192								
PIEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	173-192								
PIEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	173-192								
PIEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	175-194								
PIEX8_ADE02	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 2	38-61	119-140							
PIEX8_ADE03	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	27-48								
PIEX8_ADE05	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	38-61	119-140							
PIEX8_ADE41	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 41	38-61	128-146							
PIEX8_ADEM1	HEXON-ASSOCIATED PROTEIN PRECURSOR	MOUSE ADENOVIRUS TYPE 1	36-52								
PIEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7, AND 3	92-117								
PIEX9_ADEC2	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	52-77								
PIEX9_ADENT	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	60-82								
PIHO_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	537-593	558-580	609-636						
PI177_ASFB7	LATE PROTEIN I177L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	68-81								
PI196_ASFB7	LATE PROTEIN I196L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	169-190								
PI226_ASFB7	LATE PROTEIN I226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	60-77								
PI329_ASFB7	LATE PROTEIN I329L PRECURSOR	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	239-260								
PI78_ASFB7	EARLY PROTEIN I78R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	2-29								
PIBMP_SOCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	97-119								
PIC18_EBV	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	101-123	131-153	359 377						
PIC18_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	156-176	202-222							
PIC18_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	8-29	45-61	122-143	751-768					
PIC18_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	8-29	45-61	122-143	751-768					
PIC18_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	8-29	122-143	746 763						
PIC18_HSVB2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BIAV)	12-37	130-151							
PIC18_HSVEB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EQUINE HERPESVIRUS TYPE 1	37-56	129-144	333-355						
PIC18_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	27-49	51-70	647 672						
PIC18_MCMVS	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	126-144	202-229	386-411						
PIC18_PRVIF	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	285-307	698-718							
PIC18_VZVD	PROBABLE PROCESSING AND TRANSPORT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	69-88	619-639	725-744						
PICP0_HSV11	IMMEDIATE-EARLY PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	668-684								
PICP0_HSV2H	VMW110 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	713-729								
PICP0_PRVD	EARLY PROTEIN 0	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	82-102								
PICP3_HSV1F	INFECTED CELL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	211-227								
PICP4_HSV11	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	81-98	621-637							
PICP4_HSVEB	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	708-725	736-759							
PICP4_HSVEK	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	708-725	736-759							
PICP4_HSVMG	TRANS-ACTING TRANSACTIVATOR PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	488-506	585-611	1202-1218						
PICP4_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	547-563								

PCGENE	PTICTLZIP	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PIEI0_PRVIF	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	731-748								
PIEI0_PRVKA	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN KAPLAN)	720-737								
PIE61_HCMVA	TRANSCRIPTIONAL REGULATOR IE61 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	286-304	364-381							
PIE61_HISV1I	TRANSCRIPTIONAL REGULATOR IE61	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	378-394								
PIE61_HISV2H	TRANSCRIPTIONAL REGULATOR IE61	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	378-394								
PIE61_HISVED	TRANSCRIPTIONAL REGULATOR IE61 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	337-353	385-401							
PIE61_HISVSA	52 KD IMMEDIATE-EARLY PHOSPHOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	301-326								
PIE68_HISV1I	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-205								
PIE68_HISVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4	88-104								
PIE68_HISVED	IMMEDIATE-EARLY PROTEIN	EQUINE HERPESVIRUS TYPE 1	93-110								
PIE68_PRVKA	IMMEDIATE-EARLY PROTEIN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	85-108								
PIE68_VZVD	GENE 61/70 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	57-78								
PIR14_HCMVA	HYPOTHETICAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	117-137								
PKERB_AVIER	ERBB TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS	64-84	297-324							
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	71-88								
PKFES_FSVST	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	2-22								
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	269-288								
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	141-159	243-263	434-450	548-563	781-801	856-877			
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRCII)	247-274								
PKFPS_FUISV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	259-275	346-370	400-420	587-614					
PKITH_ASFB7	THYMIDINE KINASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	18-41								
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	403-418	428-446							
PKITH_FLDV	THYMIDINE KINASE	FISH LYMPHOCYSTIS DISEASE VIRUS	96-117	252-275							
PKITH_HISV1I	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	223-249								
PKITH_HISV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	223-249								
PKITH_HISV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	223-249								
PKITH_HISV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	223-249								
PKITH_HISV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	223-249								
PKITH_HISV2J	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	224-250	333-348							
PKITH_HSVB6	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 6660)	193-219	280-304							
PKITH_HSVBH	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 2 (STRAIN BIUM-1)	180-202								
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 1 (STRAIN WCII)	381-399	609-633							
PKITH_HSVBQ	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1.2 (STRAIN Q1932)	194-220	283-306							
PKITH_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	174-193	261-284							
PKITH_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HVS25A)	88-33	174-193	274-298						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	171-189								
PKITH_HSVI1	THYMIDINE KINASE	ICTALURID HERPESVIRUS 1	14-32								
PKITH_HSVMR	THYMIDINE KINASE	MARMOSET HERPESVIRUS	189-215								
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	208-232								
PKITH_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	183-202	208-234							
PKITH_VZV4	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 40A2)	197-216								
PKITH_VZV7	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 7-1-3)	197-216								
PKITH_VZVD	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	197-216								
PKITH_VZVG	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN GK)	197-216								
PKITH_VZVW	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (VZV)	197-216								
PKKIT_FSVHZ	KIT TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 4)	192-214	276-297							
PKRIS_HSVI1	GENE 13 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	151-167	358-374							
PKRI6_HSVI1	GENE 16 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	197-217	286-311							
PKRI_HISV1I	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	280-296	358-377							
PKRI_HISV2	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 2)	276-296	358-377							
PKRI_HISVEB	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	289-307								
PKRI_HISVEK	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	289-307								
PKRI_VZVD	SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	139-157								
PKR2_EBV	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	196-211	113-138							
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	247-267								
PKR2_HSVEB	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	317-339	441-462							
PKR2_PRVN3	SERINE/THREONINE-PROTEIN KINASE 2	PSEUDORABIES VIRUS (STRAIN NIA-3)	164-185	282-305							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PKRJ_VZVD	PROBABLE SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	116-131	226-247	154-373						
PKR73_HSVII	GENE 73 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	841-858								
PKR74_HSVII	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	359-380	548-575							
PKRB1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	199-214								
PKRB1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	199-214								
PKRB1_VARV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	199-214								
PKRF1_SFVKA	POSSIBLE PROTEIN KINASE C20	SHOPE FIBROMA VIRUS (STRAIN KASZA)	83-98								
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-100								
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	52-67								
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	85-100								
PKROS_AVISU	ROS TYR KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	6-29	202-223	284-305						
PKRYK_AVIUU	TYR PROTEIN KINASE TRANSFORMING PROTEIN R	AVIAN RETROVIRUS RPL30	154-172	221-241							
PKSEA_AVIET	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SE	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN S13)	158-177								
PKSRC_AVIS2	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PR2257)	361-377								
PKSRC_AVISR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN RASV1441)	361-377								
PKSRC_AVISS	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN SI)	361-377								
PKSRC_AVIST	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN ST)	361-377								
PKSRC_RSVHI	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN H-19)	361-377								
PKSRC_RSVP	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	361-377								
PKSRC_RSVPA	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PATO1T)	358-374								
PKSRC_RSVSR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN SCHMIDT-RUPPIN)	361-377								
PKYES_AVISY	TYR-PROTEIN KINASE TRANSFORMING PROTEIN Y	AVIAN SARCOMA VIRUS (STRAIN Y73)	361-377								
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	489-511								
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	489-511								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	458-480								
PL52_ADE02	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	217-239								
PL52_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	217-239								
PLECI_FOWPM	HEPATIC LECTIN HOMOLOG	FOWLPOX VIRUS (ISOLATE HP 438[MUNICH])	3-26								
PLMP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95 8)	20-43	79-100							
PLMP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95 8)	20-43	79-100							
PLMP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95 8)	20-43	79-100							
PLMP1_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	181-196	204-226	261-288	291-315	346-369	390-410			
PMCEL_SFVKA	MRNA CAPPING ENZYME, LARGE SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	244-260	556-578	679-699						
PMCEL_VACCC	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-102	265-282	289-312	687-707					
PMCEL_VACCV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN WR)	81-102	265-282	289-312	687-707					
PMCEL_VARV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VARIOLA VIRUS	81-102	265-282	289-312	687-707					
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	217-241								
PMCE_REOVD	MRNA CAPPING ENZYME	REOVIRUS (TYPE 3 / STRAIN DEARING)	358-384	567-588	714-741						
PMOVP_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN S	157-172								
PMOVP_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN	157-172								
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	49-74	178-205							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	25-50	186-201							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	186-201								
PMOVP_TMVCO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	88-107	156-171							
PMTC1_CHVN1	MODIFICATION METHYLASE CVIBI	CHLORELLA VIRUS NC-1A	129-156								
PMTC1_CHVP1	MODIFICATION METHYLASE CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1 (	72-94								
PMTC1_CHVN1	MODIFICATION METHYLASE CVIBIII	CHLORELLA VIRUS NC-1A	177-192	265-286							
PMYBE_AVILE	P135-GAG-MYB-ETS TRANSFORMING PROTEIN (	AVIAN LEUKEMIA VIRUS E26	104-124								
PMYB_AVDMB	MYB TRANSFORMING PROTEIN	AVIAN MYELOBLASTOSIS VIRUS	218-238	301-326							
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	159-181								
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	84-99								
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	84-99								
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	31-50								
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	57-74								
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	317-342								
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE IC280)	428-446								
PNCAP_IHNV	NUCLEOCAPSID PROTEIN	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	110-133	219-245							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNCAP_INSV	NUCLEOCAPSID PROTEIN	IMPATIENS NECROTIC SPOT VIRUS	155-179								
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	40-59								
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	40-59								
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	40-59								
PNCAP_MUMSO	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	156-178								
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	156-178								
PNCAP_PIIV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	36-58	218-236	256-277	321-346					
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	42-58	86-102							
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	42-58	86-102							
PNCAP_PIIB	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	167-184								
PNCAP_PIIIH	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	161-184								
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	36-58	321-346							
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	36-58	218-236	321-346						
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	299-322								
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	299-322								
PNCAP_RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	299-322								
PNCAP_RVFVZ	NUCLEOCAPSID PROTEIN	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	158-180								
PNCAP_SENDI	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z/HOST MUTANTS)	29-51	86-102							
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	42-58	86-102							
PNCAP_SENDH	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	42-58	86-102							
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	29-51	86-102							
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	112-138	317-342							
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	156-181								
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	219-241								
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	167-189								
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	240-266								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARAH)	240-266								
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC	64-80								
PNCAP_VSVSJ											
PNEF_HV2RO	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	110-129								
PNEF_HV2ST	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	106-128								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	3-29								
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	3-24								
PNRAM_IADA1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	3-24								
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	3-29								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	3-29	301-317							
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74)	299-315								
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-29								
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	3-24								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1/1)	3-24								
PNRAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H3N2:A/HEILANY/42N)	3-30								
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	3-30								
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-30								
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/60/	3-29								
PNRAM_IASH2	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	3-29								
PNRAM_IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	3-24	56-77							
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	3-29								
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	3-24								
PNRAM_IAWHM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/1/84)	3-29								
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	3-30								
PNRAM_INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	3-20								
PNRAM_INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	3-20								
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	3-20								
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	3-20								
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	3-20								
PNRAM_INBMS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/89)	3-20								
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	3-20								

PGENE	PFACTLZIP	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PMAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN SINGAPORE/222/79)	1-20							
PMAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	1-20							
PMAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/1/87)	1-20							
PNS1_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	133-151							
PNS2_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	2-26	166-221	181-204					
PNS3_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	60-78							
PNS5_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CENTRAL 01)	80-105	411-435						
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	80-105	416-438						
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	20-45	187-401						
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	20-45	187-401						
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	290-309							
PP100_HSV4U	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	182-204	350-370	441-464					
PPAP1_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	76-100							
PPAP1_MYXVA	POLY(A) POLYMERASE REGULATORY SUBUNIT	MYXOMA VIRUS (ISOLATE AUSTRALIA/ARAGO/57)	101-116							
PPAP1_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	101-116							
PPAP1_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	101-116							
PPAP1_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	101-116							
PPCNA_NPVAC	PROLIFERATING CELL NUCLEAR ANTIGEN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	67-89	227-244						
PPE31_NPVOP	31.3 KD PROTEIN IN PE 5'REGION	ORGYIA PSEUDOTSUGATA NUCLEOCAPSID POLYHEDROSIS VIRUS	117-139							
PPE35_NPVAC	35.1 KD PROTEIN IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	31-81							
PPE38_NPVAC	MAJOR DOMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	17-33							
PPEN1_ADE02	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 2	171-195							
PPEN1_ADE05	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 5	171-195							
PPEN1_ADEGX	PENTON PROTEIN	AVIAN ADENOVIRUS GALIB (STRAIN SAI)	194-214	307-324						
PPIV1_ADE07	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	413-431							
PPIV1_ADEMI	MATURATION PROTEIN	MOUSE ADENOVIRUS TYPE 1	409-428							
PPOL1_BAYMG	GENOME POLYPROTEIN	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	339-351	835-846	1012-1024	1615-1630				
PPOL1_BAYMJ	GENOME POLYPROTEIN	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN H-1)	339-351	835-846	1012-1024	1463-1485	1888-1909			
PPOL1_GOMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	691-711	1040-1063	1116-1141					
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	688-709	1031-1051	1079-1098	1149-1171	1341-1356	1761-1781	1821-1848	2070-2044
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	1112-1139	341-357	836-876	1201-1231				
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	316-340	437-448	1327-1354					
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	1811-1859							
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	637-653	941-965	1119-1134	1182-1197	1361-1387	1868-1892	2460-2487	2808-2828
			3141-3161	3220-3241	3856-3871	3967-3986				3881-3898
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	637-653	941-965	1119-1134	1138-1163	1189-1205	1282-1297	1361-1387	1778-1802
			2518-2538	2741-2764	2793-2808	3766-3781				3370-3391
PPOLG_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	850-867							
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (ECHO 9 VIRUS)	67-92							
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GREGORY)	1491-1517	1601-1626						
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1472-1498	1582-1607						
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	328-353	1475-1501	1585-1610					
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	821-846	1473-1499	1583-1608					
PPOLG_DEN1S	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1475-1501	1585-1610						
PPOLG_DENIW	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	918-943	1111-1138	1211-1236	1243-1260	1612-1628	2222-2248	2348-2365	2401-2426
PPOLG_DENJ3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	919-944	1112-1139						1010-1069
PPOLG_DENJ3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	326-354							
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	848-868	919-944	1112-1139	1244-1261	1283-1301	1613-1629	2293-2318	2361-2384
			2700-2726							2405-2425
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	848-868	919-944	1112-1139	1244-1261	1283-1301	1376-1396	1613-1629	2293-2318
			2405-2425	2700-2726						2347-2364
PPOLG_DEN3D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2.04)	848-868	919-944						

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOLO_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	848-868	919-944	1112-1139	1244-1261	1376-1396	1613-1629	2290-2315	2394-2361	2402-2422
			2701-2721								
PPOLO_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	100-120	171-196	364-391						
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159-S1)	919-944	1112-1139	1244-1261	1283-1301	1376-1396	1613-1629	2290-2315	2394-2361	2402-2422
			2697-2721								
PPOLO_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	619-664	832-859	964-981	1201-1219					
PPOLO_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	917-942	1210-1238	1242-1259	1281-1301	1418-1437	2011-2062	2221-2247	2396-2416	2404-2424
			2698-2724	4038-4063							
PPOLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	1209-1227	1241-1258	1611-1627	2220-2246	2342-2359	2400-2420	3045-3064		
PPOLO_ECH9	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY	664-690	774-799							
PPOLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	225-247	558-578	1194-1215	1650-1667					
PPOLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B MONDIAMETOGENI	560-580	1120-1141	1196-1217						
PPOLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D (HAHN-TOGENIC)	560-580	1120-1141	1196-1217						
PPOLO_ENMG3	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 3A)	560-580								
PPOLO_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	493-513								
PPOLO_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10 61)	121-141	984-1003	1036-1057	1396-1411	1465-1487	1764-1791			
PPOLO_FMDV5	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A5)	162-187								
PPOLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	121-140	984-1003	1036-1057	1396-1411	1465-1487	1763-1790			
PPOLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIDFS) (	121-141	984-1003	1036-1057	1396-1411	1465-1487	1763-1790			
PPOLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU (C-S8))	301-320								
PPOLO_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	121-141	979-998							
PPOLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	112-133	143-169	619-640	683-699	833-857	2327-2347	2442-2457	2837-2859	
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	102-128	1143-1163	1282-1301	1778-1802	2370-2397	2518-2538	3138-3152	3737-3753	3767-3782
			3877-3893								
PPOLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	102-128	1143-1163	1282-1301	1778-1802	2370-2397	2518-2538	3138-3152	3737-3753	3767-3782
			3877-3893								
PPOLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	112-133	143-169	619-640	683-699	2327-2347	2441-2456	2836-2858	2988-3007	
PPOLO_HCVE1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC1)	27-53								
PPOLO_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	112-133	143-169	619-640	683-699	833-853	863-880	2442-2457	2837-2859	
PPOLO_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	112-133	143-169							
PPOLO_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	35-41								
PPOLO_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	27-53								
PPOLO_HCVHK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-KF)	112-133	143-169							
PPOLO_HCVJ2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J2)	112-133	143-169							
PPOLO_HCVJ5	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	112-133	143-169	623-644	687-703					
PPOLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	112-133	143-169	623-644	687-703	837-861	1827-1853	2327-2347	2859-2881	3011-3010
PPOLO_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	143-169	623-644	687-703						
PPOLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	112-133	143-169	687-703	837-861	867-884	1172-1188	1827-1853	2859-2881	3011-3030
PPOLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	112-133	143-169	619-640	683-699	833-857	863-880	2327-2347	2836-2858	2988-3007
PPOLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-T1)	112-133	143-169	619-640	683-699	833-857	2327-2347	2441-2456	2836-2858	
PPOLO_HCVTH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TH)	27-53								
PPOLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	112-133	143-169	619-640	683-699	833-857	2327-2347	2441-2456	2836-2858	2988-3007
PPOLO_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LC (HC-1)	303-323								
PPOLO_HPAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	401-428	799-819	1195-1210	1687-1708	2008-2033	2068-2092			
PPOLO_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C	799-819	1195-1210	1687-1708	2008-2033	2068-2092				
PPOLO_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	799-819	1195-1210	1687-1708	2008-2033	2068-2092				
PPOLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR126)	799 819								
PPOLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA16)	778 798								
PPOLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM 175)	799-819	1195-1210	1688 1709	2009-2034	2069-2093				
PPOLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	799-819	1195-1210	1688-1709	2009-2034	2069-2093				
PPOLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	799-819	1195-1210	1688-1709	2009-2034	2069-2093				
PPOLO_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	1199-1214	1690-1711	2012-2037	2072-2096					
PPOLO_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14	1383-1406	1962-1982							
PPOLO_HRV1A	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	361-379	547-563							
PPOLO_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	386-404	572-587	859-876	1029-1052	1453-1478	1625-1641	1816-1843	1941-1961	
PPOLO_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	569-584	694-713	1022-1045	1446-1469	1618-1634	1809-1835	1843-1866		
PPOLO_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	576-591	1038-1061	1229-1253	1332-1358	1460-1485	1612-1648	1823-1849	1948-1968	

PFCGENE	PFACTCLIP	All Viruses (No Retroviruses)										
FILE NAME	PROTEIN	VIRUS										
PPOLO_IBDVD	(DINOMAIN POLYPROTEIN	HUMAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN [illegible])	1192-1955									
PPOLO_IBDVD	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	903-922									
PPOLO_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	938-963	1306-1333	1641-1668	2245-2270	2326-2351	2462-2481				
PPOLO_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	938-963	1306-1333	1642-1668	2245-2270	2326-2351	2462-2481				
PPOLO_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	938-963	1306-1333	1642-1668	2245-2270	2326-2351	2462-2481				
PPOLO_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	924-951	1314-1341								
PPOLO_KUNJN	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61)	915-940	1307-1332	1641-1666	2245-2270	2326-2351	2462-2481	2627-2652	2640-2665	2641-2665	
			361-376									
			2798-2814									
PPOLO_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	67-89	1327-1351	1356-1356	2165-2165	2326-2351	2462-2481	2519-2544	2640-2665	2640-2665	
			67-89	2366-2387	2424-2451	2766-2784						
PPOLO_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	67-89	1327-1351	815-842							
PPOLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	67-89	1327-1351	815-842							
PPOLO_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SD 526)	247-271									
PPOLO_MOFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	120-137	1174-1190	1402-1428	1788-1805	1872-1887	2012-2029	2615-2627			
PPOLO_MOMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	19-36									
PPOLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	331-347	363-378	917-962	1305-1324	1522-1548	1585-1602	1641-1657			
PPOLO_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	90-110	111-126	678-696	898-914						
PPOLO_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	690-717	826-846	1009-1034	1301-1318	1455-1482	1484-1500	1676-1697	1921-1945	2002-2022	
PPOLO_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1409-1432									
PPOLO_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1410-1433									
PPOLO_POLJL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN LANSING)	1408-1431									
PPOLO_POLJW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN W-3)	1408-1431									
PPOLO_POLJ3	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 2127)	1377-1394	1407-1430								
PPOLO_POLJL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P/LEON/37 AND P/LEON/12A1B)	1377-1394	1407-1430								
PPOLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	151-178	1391-1411	714-741	1078-1103	1468-1495	1497-1513	2606-2624	1084-1106		
PPOLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	981-999	1461-1481								
PPOLO_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	153-178	1113-740	1097-1114	1467-1494	1496-1512	2603-2621	1068-3090			
PPOLO_POLJL	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	153-178	1113-740	1097-1114	1467-1494	1496-1512	2603-2621	1081-3105			
PPOLO_PRSVH	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P/MILDANT HA)	272-290									
PPOLO_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P/MILDANT HA 5-1)	163-181									
PPOLO_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	161-181									
PPOLO_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPDII)	61-82	251-268	1113-1137	1644-1674	981-1001	1411-1428	1585-1592	2708-2726		
PPOLO_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	755-776	755-776	1010-1036	1109-1135	1456-1481	1485-1501	1677-1698	1922-1946	2588-2606	
PPOLO_PVYTU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	1004-1026	964-982								
PPOLO_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	755-776	964-982	1010-1036	1109-1135	1456-1481	1485-1501	1677-1698	1922-1946	2590-2608	
PPOLO_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	755-776									
PPOLO_PVYWI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	592-616	1326-1351	1636-1661	1903-1924	2621-2642	2702-2720	2766-2781			
PPOLO_STEVN	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	1301-1324									
PPOLO_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	19-36									
PPOLO_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UDT-76)	1475-1501	1585-1610								
PPOLO_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG/27/72)	1475-1501	1585-1610								
PPOLO_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	61-89	1327-551	1161-1178	1519-1544	1630-1653	1740-1761	2730-2757	2166-2183	2765-2781	
PPOLO_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	61-89	1327-551	815-842	1519-1544	1630-1653	2730-2757	2166-2183	2766-2784		
PPOLO_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (ITEV)	827-853	951-980	1016-1042	1114-1130	1307-1324	1490-1506				
PPOLO_THEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 1186)	924-941	1074-1093	1118-1140	1520-1546	1638-1677					
PPOLO_THEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1072-1093	1117-1138	1518-1544	1636-1675						
PPOLO_THEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	641-670	924-941	1014-1093	1119-1140	1520-1546	1638-1677				
PPOLO_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	25-59	970-991	1138-1156	1377-1395						
PPOLO_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	404-428	497-517	660-687	963-982	1317-1334	2137-2162				
PPOLO_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	186-218									
PPOLO_YEFVI	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	537-572	931-956	1303-1322	1619-1655	2240-2267	2334-2349	2437-2457	2618-2635	2795-2811	
PPOLO_YEFVI	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN FNR)	24-93	1157-1179	1228-1248	1585-1605	1495-1511	1633-1641	1761-1778	2329-2354		
PPOLO_YEFVP	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	24-93	1157-1179	1228-1248	1585-1605	1495-1511	1633-1641	1761-1778	2329-2354		
PPOLO_YEFVS	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899IB)	24-93									
PPOLH_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1410-1433									
PPOLN_EEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONK)	90-107	251-274	611-630	1001-1018	1111-1128	1921-1939	2179-2144	2701-2721		

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN C6/68 FIV)	443-469	748-766	902-923	1069-1088					
PPOLN_FCVF4	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN JAPAN/SET4)	300-328								
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	171-186	262-283	919-945	1224-1242	1378-1399	1545-1564			
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	250-266	1274-1291							
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	250-266	1272-1289							
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	250-266	1274-1291							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	249-265	1273-1290							
PPOLN_MIDOV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	488-512	628-643	700-720						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	90-107	613-634	2148-2163	2220-2240					
PPOLN_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	136-180	270-292	299-320	419-502	1330-1351	1459-1479	1491-1511		
PPOLN_RHDV3	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351)	115-135								
PPOLN_RRVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	89-106	611-632	2111-2128	2185-2205					
PPOLN_RRVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	787-797	854-874							
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	14-37	97-113	263-279	670-694	901-918	1374-1391	2035-2052		
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	91-108	617-643	2062-2077	2134-2154					
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	620-646	1123-1150	1741-1764	2148-2161	2220-2240				
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	620-646	1123-1150	1744-1763	1790-1812	2146-2161	2218-2238			
PPOLR_EPMV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	808-833								
PPOLR_OYMV	RNA REPLICASE POLYPROTEIN	ONONIS YELLOW MOSAIC VIRUS	707-727	941-962							
PPOLR_TYMV	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS	212-233	436-453	1173-1192						
PPOLR_TYMVA	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	212-233	436-453	1173-1192						
PPOLR_TYMVC	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (ISOLATE TYMIC)	212-233	436-453	1173-1192						
PPOLS_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	35-50	213-229	491-507						
PPOLS_EEEVJ	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	35-50	214-230	492-508						
PPOLS_EEVVI	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	32-48	229-245	504-522						
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON	32-48	229-245	504-522						
PPOLS_IBDV3	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	900-922								
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 0	900-922								
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	900-922								
PPOLS_IBDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PIG/98)	881-903								
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	900-922								
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	688-708								
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	1216-1243								
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	281-302								
PPOLS_RUBVM	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN M33)	280-301								
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	281-302								
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	281-302	1041-1060							
PPOLS_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	35-59	751-772	780-801						
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	33-52								
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	33-52								
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	36-51	909-933							
PPOL_AVIRE	POL POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	283-303								
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	526-544	973-993	999-1019	1070-1091					
PPOL_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	101-119	742-768	868 889						
PPOL_BIV27	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	101-119	742-768	868 889						
PPOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	487-504								
PPOL_BLVJ	POL POLYPROTEIN (REVERSE TRANSCRIPTASE	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	487-504								
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	393-419	656-671							
PPOL_CAMVC	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	184-204	380-407	471-494						
PPOL_CAMVD	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DAI)	175-199	375-402	466-489						
PPOL_CAMVE	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	184-204	380-407	471-494						
PPOL_CAMVN	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	70-97	185-205	381-408	472-495					
PPOL_CAMVS	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	184-204	380-407	471-494						
PPOL_CERV	ENZYMATIC POLYPROTEIN	CARNATION ETCHED RING VIRUS	161-186	455-478							
PPOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	320-343	1286-1311	1606-1622	1641-1665					
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	437-456								
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	437-456								

PCGENE	PIRCTLZIP	All Viruses (No Retroviruses)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	418-455							
PPOL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS (CT1)	181-401	156-416						
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	407-426	755-775						
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	407-426	755-775						
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	406-425	665-690	755-775	1041-1060				
PPOL_FMVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DYS)	191-212	464-483						
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS	126-147	768-788						
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	19-80	971-991	1048-1071					
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	330-346							
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	330-346							
PPOL_HTLV2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	609-627							
PPOL_HIV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	860-887							
PPOL_HIV1BI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	615-660	872-899						
PPOL_HIV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	872-899							
PPOL_HIV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	872-899							
PPOL_HIV1HO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	622-647	859-886						
PPOL_HIV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	860-887							
PPOL_HIV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	864-891							
PPOL_HIV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MN ISOLATE)	859-886							
PPOL_HIV1N5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	861-890							
PPOL_HIV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	622-647	860-887						
PPOL_HIV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	622-647	859-886						
PPOL_HIV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	860-887							
PPOL_HIV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RF/HAT ISOLATE)	615-660	872-899						
PPOL_HIV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (STRAIN UGANDAN-1 ISO	859-886							
PPOL_HIV1Z3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (Z2/CDC-Z34 ISOLATE)	622-647	859-886						
PPOL_HIV1Z4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ZAIRE 6 ISOLATE)	5-33							
PPOL_HIV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	379-406	907-934						
PPOL_HIV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	886-913							
PPOL_HIV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	397-424	925-952						
PPOL_HIV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205)	907-934							
PPOL_HIV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	359-386	887-914						
PPOL_HIV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	543-564	731-752						
PPOL_HIV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	888-915		887-914					
PPOL_HIV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	359-386	887-907						
PPOL_HIV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	379-406	907-934						
PPOL_IPIA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	166-190	198-225	460-477					
PPOL_IPNA	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	181-201	209-236	506-523	531-553	769-789			
PPOL_IPNAJ	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	102-129	128-155	407-433	425-442				
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (PAAGSHEKTE SHEEP RET	186-213	507-536	660-679					
PPOL_MCFD	POL POLYPROTEIN	MONK CELL FOCUS FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	17-53							
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	611-631	728-744						
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	335-354	978-998	1004-1024	1041-1097				
PPOL_MLVCB	POL POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	64-84	90-110	167-183					
PPOL_MLVFB	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	340-359	983-1003	1009-1029	1086-1102				
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	340-359	983-1003	1009-1029	1086-1102				
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-211)	340-359	983-1003	1009-1029	1086-1102				
PPOL_MLVMO	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	335-354	978-998						
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	335-354	978-998	1004-1024	1081-1097				
PPOL_MLVUK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	161-183	189-209	446-467					
PPOL_MMTVB	POL POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	196-219	731-751						
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	741-761							
PPOL_OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	369-395	469-488	632-647	1045-1061				
PPOL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	719-742							
PPOL_RTBV	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	891-915	1018-1043						
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	891-915	1018-1043						

PCGENE	P12CTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	188-209	335-356	845-869	976-998					
PPOL_SFV3L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3)	188-206	337-358	847-871	978-998					
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	895-915								
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	711-726	900-920							
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	899-926								
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	726-741	915-935							
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	884-911								
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	680-695	869-896							
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	180-407	908-935							
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	180-407	712-733	906-931						
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMM ISOLATE)	343-370	871-898							
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJMC1 ISOLATE)	346-373	874-901							
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS	748-768								
PPOL_SMSAV	POL POLYPROTEIN	SIMIAN SARCOMA VIRUS	100-120	177-201							
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	131-155								
PPOL_SRVI	POL POLYPROTEIN	SIMIAN RETROVIRUS	743-763								
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	488-507	651-666	931-991						
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	488-507	651-666	931-991						
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	488-507	651-666	931-991						
PPP150_HCMVA	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153-171	183-210							
PPP28_HCMVA	28 KD STRUCTURAL PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-141								
PPP41_HSV6G	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	158-175	396-411							
PPP65_HCMVA	65 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	311-333								
PPP65_HCMVT	64 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	301-323								
PPP71_HCMVA	71 KD UPPER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-102								
PPR73_MMTVB	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	40-61								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	44-65								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PRASH_MSVHA	TRANSFORMING PROTEINS P21 AND P29	HARVEY MURINE SARCOMA VIRUS	49-73								
PRASH_RRASV	TRANSFORMING PROTEINS P21 AND P29	RASHEED RAT SARCOMA VIRUS	56-80								
PREEP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS	14-36								
PREFR_VACCV	RIFAMPICIN RESISTANCE PROTEIN	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	274-298	316-335	517-535						
PREFR_VARV	RIFAMPICIN RESISTANCE PROTEIN	VARIOLA VIRUS	274-298	316-335	517-535						
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	2-17								
PREV_SIVGB	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	45-72								
PRIR1_ASFM2	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	139-164	189-210	495-510						
PRIR1_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	793-812								
PRIR1_HCMVA	RIBONUCLEOTIDE REDUCTASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	192-212	669-684							
PRIR1_HSV11	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	415-430	587-613							
PRIR1_HSVEB	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	60-85	266-288	668-694						
PRIR1_HSVSA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	136-151								
PRIR1_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	36-51								
PRIR1_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	36-51								
PRIR1_VARV	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	36-51								
PRIR1_VZVD	RIBONUCLEOTIDE REDUCTASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	94-58	221-247	258-280						
PRIR2_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	209-236								
PRIR2_HSV11	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	44-66	275-292							
PRIR2_HSVIK	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	43-65	249-261	274-291						
PRIR2_HSV21	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	41-63	272-289							
PRIR2_HSVB3	RIBONUCLEOTIDE REDUCTASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	244-266								
PRIR2_HSVEB	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	61-88	251-273							
PRIR2_HSVSA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	212-239								
PRIR2_SFVKA	RIBONUCLEOTIDE REDUCTASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	184-206	215-237							
PRIR2_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	184-206								
PRIR2_VACCP	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN L-IVP)	184-206								
PRIR2_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	184-206								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRIRI_VARV	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	184-206	215-237							
PRIRI_VZVD	RIBONUCLEOTIDE REDUCTASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	237-258								
PRMIL_AVBVR	RMIL SER/THR-PROTEIN KINASE TRANSFORMING P	AVIAN ROUS-ASSOCIATED VIRUS TYPE 1	180-405								
PRPM_VACCV	RNA-POL-ASSOCIATED TRANSCRIPTION SPEC FACT	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	171-189	265-290	371-394	561-578					
PRPM_VARV	RNA-POL-ASSOCIATED TRANSCRIPTION SPEC FACT	VARIOLA VIRUS	171-189	265-290	371-394	561-578					
PRPOI_VACCC	DNA-DIRECTED RNA POL 147 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-96	304-329	848-871	1005-1032					
PRPOI_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	76-96	304-329	848-871						
PRPOI_VARV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	76-96	304-329	848-871	1005-1032					
PRPOJ_CAPVK	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	CAPRIPOXVIRUS (STRAIN KS-1)	12-29	477-498							
PRPOJ_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	COWPOX VIRUS	150-170	258-274	480-505						
PRPOJ_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	150-170	258-274	480-505						
PRPOJ_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VARIOLA VIRUS	150-170	258-274	480-505						
PRPOK_VACCC	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	33-48								
PRPOK_VACCV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	33-48								
PRPOK_VARV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VARIOLA VIRUS	33-55								
PRPOR_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	38-59								
PRPOT_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	38-59								
PRPOT_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VARIOLA VIRUS	38-59								
PRPOX_FOWPI	DNA-DIRECTED RNA POLYMERASE 18 KD POLYPEP	FOWLPOX VIRUS (STRAIN FP-1)	57-81								
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	175-197	307-329	1161-1180	1215-1238	1533-1550	1551-1570	1955-1977	2129-2151	2802-2824
			3133-3156								
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	97-118	602-617	754-774	825-851	2530-2553	1041-1068			
PRRPI_DHVII	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	DHORI VIRUS (STRAIN INDIAN/1313/61)	247-264	295-299	533-549	573-594	668-691				
PRRPI_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	244-262								
PRRPI_IABEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/BEIJING/11/56)	244-262								
PRRPI_IADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/DUNEDIN/4/73)	244-262								
PRRPI_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	244-262								
PRRPI_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/LQUINEA/LONDON/1416/73)	244-262								
PRRPI_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	244-262								
PRRPI_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	244-262								
PRRPI_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	244-262								
PRRPI_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	244-262								
PRRPI_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	244-262								
PRRPI_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	244-262								
PRRPI_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	244-262								
PRRPI_IAMEM	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/8/88)	244-262								
PRRPI_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	244-262								
PRRPI_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	244-262								
PRRPI_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	244-262								
PRRPI_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	244-262								
PRRPI_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	138-163	244-262							
PRRPI_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	244-262								
PRRPI_IAWIS	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	244-262								
PRRPI_IAZHO	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	244-262								
PRRPI_IAZON	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	244-262								
PRRPI_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	244-262								
PRRPI_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	205-222								
PRRPI_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	205-222								
PRRPI_INBLE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA B VIRUS (STRAIN B/LEE/40)	205-222								
PRRPI_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT PI	INFLUENZA C VIRUS (STRAIN C/JJ/50)	317-341	564-591							
PRRP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	534-557								
PRRP2_IADK2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	534-557								
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	534-557								
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	534-557								
PRRP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/I QUINEA/LONDON/1416/73)	534-557								
PRRP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	534-557								
PRRP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	534-557								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRP3_IAP10	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	534-557								
PRRP3_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	534-557								
PRRP3_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/	534-557								
PRRP3_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	534-557								
PRRP3_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	534-557								
PRRP3_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	68-86	534-557							
PRRP3_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	534-557								
PRRP3_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1120/82)	534-557								
PRRP3_IAZI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	534-557								
PRRP3_IAZT7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	530-557								
PRRP3_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	32-54								
PRRP3_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	32-54								
PRRP3_INBSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	32-54								
PRRP3_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JI/50)	406-425								
PRRP3_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	219-234	542-560							
PRRP3_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	219-234								
PRRP3_IACHI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	219-234	542-560							
PRRP3_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	219-234	542-567							
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	219-234	542-560							
PRRP3_IAGU3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	219-234	542-560							
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	219-234	542-560							
PRRP3_IAHK6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	219-234	542-560							
PRRP3_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	219-234	542-560							
PRRP3_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	219-234	542-560							
PRRP3_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	542-560								
PRRP3_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	219-234	542-560							
PRRP3_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	219-234	542-560							
PRRP3_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	219-234	542-560							
PRRP3_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	219-234	542-560							
PRRP3_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	219-234	542-560							
PRRP3_IAMEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3		219-234	542-560							
PRRP3_IANT4	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	219-234	542-560							
PRRP3_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	219-234	469-485	542-560						
PRRP3_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/	219-234	542-560							
PRRP3_IASE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/82)	219-234	542-560							
PRRP3_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	219-234	542-560							
PRRP3_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	219-234	542-560							
PRRP3_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	219-234	542-560							
PRRP3_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	219-234	542-560							
PRRP3_IAZI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	219-234	542-560							
PRRP3_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	219-234	542-560							
PRRP3_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	71-86	535-561							
PRRP3_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	71-86	535-561							
PRRP3_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	74-96	552-571							
PRRP3_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JI/50)	74-96	552-571							
PRRP3_THOGV	RNA-DIRECTED RNA POL SUBUNIT P3	THOGOTO VIRUS	85-101								
PRRPA_CVHJ2	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	82-104	410-436	858-878	1482-1507	1521-1542	1543-1568	2125-2149	2974-2992	3533-3559
PRRPA_CVMJD	RNA-DIRECTED RNA POLYMERASE	MURINE HEPATITIS VIRUS (STRAIN DEFECTIVE JHM)	440-467								
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	917-938	1188-1215	1338-1354	1422-1449	1461-1480	1567-1585	1783-1806	2165-2192	2337-2354
			2470-2494	2660-2676	2944-2961	3229-3253	3405-3425	3933-3954			
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	806-832	1509-1537	1738-1757	2137-2154					
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	385-412	1302-1324	1835-1850	2698-2723					
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	385-412	746-770	1302-1324	1833-1848	2696-2721				
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	173-200	482-508							
PRRPB_CVPR1	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH1	80-106								
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	140-164	338-365	887-911	1335-1352	1654-1674				
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	21-41	146-161							

PCGENE	PIRCTLZIP	AA Viruses (No Bacteriophage*)									
FILE_NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRUPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	78-104	101-124	440-465	1096-1116	1117-1138	1141-1165	1519-1554	1869-1886	2001-2023
PRUPL_EBOV	RNA-DIRECTED RNA POLYMERASE	EBOLA VIRUS	16-31								
PRUPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	131-168	173-194	526-611	1361-1383	2081-2105				
PRUPL_IBSV	RNA POLYMERASE BETA SUBUNIT	INFLUENZA B VIRUS (STRAIN B/LEE/40)	3-19								
PRUPL_IBSVA	RNA POLYMERASE BETA SUBUNIT	INFLUENZA A VIRUS (STRAIN A/PR/8/34)	3-19	1181-1206	1425-1447	1611-1631	1919-1948	2018-2037			
PRUPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	15-30	144-169	221-248	111-341	471-492	546-569	931-946	1042-1067	1410-1436
PRUPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	15-30	144-169	221-248	471-492	546-569	931-946	1042-1067	1410-1436	1637-1656
PRUPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	1715-1731	1805-1832	1990-2017	2011-2034	2221-2246	2379-2404	2038-2063		
PRUPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	285-312	617-632	998-1023	1160-1185	1279-1304	1920-1940	2038-2063		
PRUPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C48)	41-66	110-135	265-280	961-986	1100-1124	1132-1153	1601-1622	2118-2141	
PRUPL_PIUIT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN KOMAROFF)	704-724	1531-1552	1961-1984	2040-2063					
PRUPL_PIUIT4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	109-124	268-291	308-334	1309-1335	1362-1388	1983-2010	2115-2134		
PRUPL_PUDAH	RNA-DIRECTED RNA POLYMERASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	172-193	304-330	864-861	985-909	1848-1868	2064-2084	2111-2134		
PRUPL_RABVP	RNA POLYMERASE BETA SUBUNIT	PUUMALA VIRUS (STRAIN HALNAS 81)	173-194	596-611	1361-1385	1617-1636	2086-2110				
PRUPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	266-286	342-361	741-762	1446-1461	1492-1517				
PRUPL_RDV	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	266-286	342-361	741-762	1446-1461	1492-1517	1744-1761			
PRUPL_RVFV2	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	10-27	533-560	680-697	1293-1326					
PRUPL_SENDS	RNA POLYMERASE BETA SUBUNIT	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	582-609	2009-2035							
PRUPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	64-83	104-120	194-218	844-861	885-900	1405-1420	1844-1864	2107-2128	
PRUPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	14-38	664-681	703-720	1225-1240	1664-1684	1973-1948			
PRUPL_SEOUR	RNA-DIRECTED RNA POLYMERASE	SENDAI VIRUS (STRAIN Z)	64-83	104-120	194-218	844-861	885-900	1405-1420	1844-1864	2107-2128	
PRUPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SEOUL VIRUS (STRAIN 80-39)	151-168	173-194	394-419	596-611	1361-1385	2081-2105			
PRUPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	41-66	108-124	263-289	1094-1118	1135-1147	1338-1380	2117-2137		
PRUPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	SONCHUS YELLOW NET VIRUS	126-146	391-406	601-627	704-711	861-881	886-911	1484-1510	1776-1792	
PRUPL_UUK	RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIII/BR-01)	918-974	1335-1410	1718-1800	2609-2637	2678-2702				
PRUPL_VSVH	RNA POLYMERASE BETA SUBUNIT	UUKUNIEMI VIRUS	698-714	913-948	1404-1431	1570-1591	2060-2081				
PRUPL_VSVO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN IU)	156-183	311-339	901-928	1936-1962	2080-2107				
PRUPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OK)	156-183	312-339	1936-1962	2080-2101					
PRUPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	1936-1962								
PRUPO_BWYVP	PUTATIVE RNA-DIRECTED RNA POL	APPLE CHLOROTIC LEAF SPOT VIRUS	226-247	1036-1054	1137-1155	1775-1791					
PRUPO_BYDV1	PUTATIVE RNA-DIRECTED RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	299-326								
PRUPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE NAV-PS1)	359-386	391-416	505-532						
PRUPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	359-386	391-416	505-532						
PRUPO_CARMV	PROBABLE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PPAV)	359-386	391-416	505-532						
PRUPO_CCMVS	PUTATIVE RNA-DIRECTED RNA POL	CARNATION MOTTLE VIRUS	4-30	92-107	127-150	818-833					
PRUPO_CNV	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN)	403-466	574-591	1011-1033	1521-1539					
PRUPO_CRV	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER NECROSIS VIRUS	277-300	345-371	470-494						
PRUPO_DNVI	PUTATIVE RNA-DIRECTED RNA POL	CYMBIDIUM RINGSPOT VIRUS	96-111	345-371	470-494						
PRUPO_LTCVA	RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE TASPER)	221-238								
PRUPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	35-52	597-611	659-682	918-1008	1234-1258	1770-1793	2077-2099		
PRUPO_MCMV	PROBABLE RNA-DIRECTED RNA POL	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	35-52								
PRUPO_PEAMV	RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	16-41	101-127	133-159						
PRUPO_PLAVI	PUTATIVE RNA-DIRECTED RNA POL	PEA ENATION MOSAIC VIRUS	144-161	316-336	431-456	558-574					
PRUPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAF ROLL VIRUS (STRAIN 1)	111-138	576-600							
PRUPO_PPMV3	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAF ROLL VIRUS (STRAIN WAGENINGEN)	111-138	576-600							
PRUPO_RCMV	PROBABLE RNA-DIRECTED RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	35-52								
PRUPO_REDVJ	RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	195-195	703-726	1069-1096	1491-1507					
PRUPO_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DIJONES)	278-300								
PRUPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	161-176								
PRUPO_ROTBR	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN B1)	161-176								
PRUPO_ROTBU	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	132-156	247-269	844-861	904-911	942-967	1017-1046			
PRUPO_ROTPC	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	132-156	247-269	844-861	904-911	942-967	1017-1046			
PRUPO_ROTPO	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN GOTTFRIED)	188-213	354-374	318-333	769-784	836-858	938-957			
PRUPO_ROTSI	RNA-DIRECTED RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	13-33	112-136	247-269	844-861	904-911	942-967	1017-1046		
PRUPO_SBMV	PROBABLE RNA-DIRECTED RNA POL	SOUTHERN BEAN MOSAIC VIRUS	38-64	122-143	188-206	281-302	444-466	635-643	825-846		
PRUPO_TACV	RNA POLYMERASE	TARTARTIF VIRUS	88-107	166-189	1281-1301	1676-1692	3019-3046				

PCGENE FILENAME	PRETTYZIP PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPO_TBSVC	PUTATIVE RNA-DIRECTED RNA POL	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	277-300	345-371	470-494						
PRRPO_TCV	PUTATIVE RNA-DIRECTED RNA POL	TURNIP CRINKLE VIRUS	31-58	241-263							
PRRPO_TMGMV	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	209-231	1085-1100							
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (VULGARE)	700-724	1090-1105	1587-1610						
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	700-724	1090-1105	1587-1610						
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	700-724	1090-1105	1151-1170	1587-1610					
PRRPO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A)	113-135								
PRRPO_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	5-26								
PRRPP_CHAV	RNA POLYMERASE ALPHA SUBUNIT	CHANDIPURA VIRUS (STRAIN 1653514)	124-146								
PRRPP_MUMP1	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	211-238								
PRRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	212-239								
PRRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-239								
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	256-276								
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN HEALDSBURG 1083/74)	256-276								
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	216-243								
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIMA)	216-243								
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIMA)	220-247								
PRRPP_PI4HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	220-247								
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-161								
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	8-32								
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	8-32								
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	8-32	216-237							
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	8-32	216-237							
PRRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	8-32	216-237							
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN WI)	199-226	282-301							
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC	197-223								
P327R_ASFB7	327JR PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	196-218								
PSODC_VACCC	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-40								
PSODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-40								
PSODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	19-40								
PSPHR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	58-79	627-646							
PSPHR_CBEPV	SPHEROIDIN PRECURSOR	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	177-201								
PSPI1_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	62-80	217-243							
PSWFA_SPVKA	SWF8A PROTEIN	SWINEPOX VIRUS (STRAIN KASZA)	61-83								
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	354-369								
PTALA_POVBA	LARGE T ANTIGEN	POLYOMAVIRUS BK (STRAIN AS)	202-224	429-444							
PTALA_POVBK	LARGE T ANTIGEN	POLYOMAVIRUS BK	202-224	429-444							
PTALA_POVBO	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	385-400								
PTALA_POVHA	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	43-69	549-564							
PTALA_POVJC	LARGE T ANTIGEN	POLYOMAVIRUS JC	201-223	428-443							
PTALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	43-69	516-542							
PTALA_POVM3	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	576-591								
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	574-589								
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	571-586								
PTALA_POVMK	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN KILHAM)	173-191	278-304	446-472						
PTALA_SV40	LARGE T ANTIGEN	SIMIAN VIRUS 40 (SV40)	200-222	427-442							
PTAMI_POVHA	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	43-69								
PTASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMAVIRUS	43-69								
PTASM_POVLY	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	43-69								
PTASM_POVMK	SMALL T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN KILHAM)	43-69	67-89							
PTATR_NPVAC	TRANS-ACTIVATING TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	406-431								
PTATR_NPVBM	TRANS-ACTIVATING TRANS REG PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	411-436								
PTATR_NPVOP	TRANS-ACTIVATING TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	389-414								
PTAT_BIV06	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	44-59								
PTAT_BIV27	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	44-59								
PTAT_HTL1A	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	192-210								
PTAT_HTL1C	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	192-210								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTAT_HV1U4	TAT PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISO	18-43								
PTCB_FLV	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	6-22	98-118							
PTEGP_HSVEB	PROBABLE TEGUMENT PHOSPHOPROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-118								
PTEGP_HSVEK	TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	101-118								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	141-166	767-789	814-835	1052-1075	1194-1220	1469-1496	1869-1893	3061-3077	3102-3126
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	342-358	644-668	1061-1077	1307-1322	1323-1345	1419-1446	1509-1536	1957-1974	2199-2221
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	12-27	623-646	1732-1759						
PTEGU_HSV60	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	131-152	345-365	615-636	1027-1043	1308-1328	1562-1579			
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AR4P)	432-456	559-582	1072-1099	1107-1132	1618-1640	1764-1791	2263-2285		
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	467-491	714-737	989-1008	1121-1137	1155-1174	1177-1193	1503-1525	1607-1622	1898-1915
			2421-2439								
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	433-456	494-511	711-728	801-823	895-920	1013-1034	1360-1376	1632-1657	1780-1807
			2008-2029	2270-2287	2694-2711						
PTERM_ADE02	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	63-80	593-616							
PTERM_ADE05	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	63-80	593-616							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	63-80	580-603							
PTERM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	46-63	334-350	546-569						
PTOP2_ASFB7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	119-146	686-707							
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	119-146	685-706							
PTR14_HCMVA	HYPOTHETICAL PROTEIN TRL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	139-165								
PTREL_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	56-74								
PTYSY_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	11-29								
PU13R_HSV6U	POSSIBLE GANCICLOVIR KINASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	400-415								
PU2L_HSV6U	PROTEIN 2L	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	4-27								
PUDPE_NPVAC	UDP-GLUCOSYLTRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	452-477								
PUL02_HCMVA	HYPOTHETICAL PROTEIN UL2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-49								
PUL03_HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-37								
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	253-268								
PUL06_HCMVA	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-208								
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-429								
PUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	437-461								
PUL06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	44-60								
PUL07_EBV	BBRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	127-149								
PUL07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	88-108	186-209							
PUL07_HSV11	PROTEIN UL7	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	177-200								
PUL07_HSVEB	GENE 55 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	11-32								
PUL07_HSVSA	GENE 42 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	44-61								
PUL07_VZVD	GENE 53 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	158-176	202-224							
PUL08_HSV11	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	510-538	705-726							
PUL08_VZVD	GENE 52 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	228-255	593-616							
PUL09_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	564-584								
PUL09_HSVEB	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	171-196	612-628							
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	68-92	168-190	484-508						
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	223-247								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	449-467								
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	280-299								
PUL14_HSV11	HYPOTHETICAL UL14 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	96-116								
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	100-127								
PUL16_HSV11	PROTEIN UL16	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	32-49								
PUL16_HSVEB	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	26-43	98-119	324-339						
PUL16_HSVSA	GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	69-87	278-295							
PUL16_VZVD	GENE 44 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	65-80	317-332							
PUL17_EBV	PROTEIN BGLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	373-393								
PUL17_HCMVA	HYPOTHETICAL PROTEIN UL17	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-82								
PUL17_HSV11	PROTEIN UL17	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	156-181								
PUL17_HSVSA	GENE 32 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	94-118	348-370							
PUL19_HCMVA	HYPOTHETICAL PROTEIN UL19	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	61-85								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PUL20_PRVN1	UL20 MEMBRANE PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	54-76								
PUL20_VZVD	GENE 20 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201-224								
PUL21_HCMVA	HYPOTHETICAL PROTEIN UL21	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	91-110								
PUL21_HSV11	PROTEIN UL21	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	98-114	130-146							
PUL21_HSV1B	PROTEIN UL21	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	98-114	130-146							
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	119-142	294-321	379-403	412-427					
PUL21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	270-293	300-327							
PUL22_HCMVA	HYPOTHETICAL PROTEIN UL22	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	44-67								
PUL24_EBV	PROTEIN BXRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	134-155								
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	206-222								
PUL24_HSV11	PROTEIN UL24	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	147-166								
PUL24_ILTVT	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	158-179								
PUL25_HCMVA	HYPOTHETICAL PROTEIN UL25	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	484-500								
PUL25_HSV11	VIRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	86-101								
PUL25_HSVEB	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-104	110-147							
PUL25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	244-265	344-368							
PUL25_ILTVT	64.1 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	270-287	316-336							
PUL27_HCMVA	HYPOTHETICAL PROTEIN UL27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	307-324	486-507							
PUL29_HCMVA	HYPOTHETICAL PROTEIN UL29	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	239-266								
PUL30_HCMVA	HYPOTHETICAL PROTEIN UL30	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-32								
PUL31_EBV	PROTEIN BFLF2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	273-296								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	410-437	582-602							
PUL31_HSV11	PROTEIN UL31	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	95-116								
PUL31_HSVEB	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-125	288-309							
PUL31_HSVSA	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	145-161	183-190							
PUL31_VZVD	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-138	295-316							
PUL32_HSV11	PROBABLE MAJOR ENV GLYCOPROTEIN UL32	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	127-143	564-585							
PUL32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	81-108								
PUL32_VZVD	PROBABLE MAJOR ENV GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	553-574								
PUL33_HCMVA	G-PROTEIN COUPLED REC HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	76-102								
PUL34_HCMVA	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	214-232	297-321							
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	251-275								
PUL34_HSVEB	VIRION GENE 26 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	249-264								
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	207-229								
PUL34_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	244-266								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	229-252	310-329	331-348						
PUL36_HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	143-168	387-410							
PUL37_EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	21-36	133-155	707-730	984-1004					
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	229-252	262-277	445-467	665-681	758-777	925-947	1009-1028		
PUL37_HSVEB	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	414-440	491-510	664-690	778-805	901-919				
PUL37_HSVSA	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	5-20								
PUL37_VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	4-19	104-124	140-165	168-191	196-212	229-244	248-269	670-694	776-803
PUL38_HCMVA	HYPOTHETICAL PROTEIN UL38		904-923								
PUL40_HCMVA	HYPOTHETICAL PROTEIN UL40	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	199-220								
PUL41_HCMVA	HYPOTHETICAL PROTEIN UL41	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	18-35								
PUL43_HSV11	MEMBRANE PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	15-31	116-134							
PUL43_HSVEB	GENE 37 MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-63	139-160	343-365	394-421					
PUL43_VZVD	GENE 15 MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	34-60	86-107							
PUL45_HSV11	PROTEIN UL45	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	88-114	127-146	160-180	277-299	374-400				
PUL45_HSV1K	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	25-46								
PUL45_HSV1M	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	25-46								
PUL47_HCMVA	PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	25-46								
PUL47_HSV11	VIRION PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	193-218	438-464	533-556	614-640	741-766				
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-425								
PUL47_HSVBP	80.7 KD ALPHA TRANS-INDUCING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	404-425								
PUL47_HSVE4	97 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	681-702								
		EQUINE HERPESVIRUS TYPE 4	580-601								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PUL47_HCMVA	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	387-608								
PUL47_VZVD	ALPHA TRANS-INDUCING FACTOR 91.8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	42-58	608-627							
PUL48_EBV	HYPOTHETICAL BFRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	336-358								
PUL48_HCMVA	HYPOTHETICAL PROTEIN UL49	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	248-264	328-343							
PUL49_HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	226-252								
PUL49_HSV8A	HYPOTHETICAL GENE 66 PROTEIN	HERPES VIRUS SAIMIRI (STRAIN 11)	232-253								
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	96-119								
PUL51_HSV11	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	49-66								
PUL51_HSV24	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	169-190								
PUL51_HSV8B	GENE 8 PROTEIN	HERPESVIRUS SAIMIRI TYPE 1 (STRAIN AB4P)	164-189								
PUL51_VZVD	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	30-49								
PUL52_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	44-59								
PUL52_HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	17-37	65-91							
PUL52_HSV24	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	8-27								
PUL53_HSV8B	DNA REPLICATION PROTEIN UL53	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	8-27	115-139	176-197						
PUL53_HSV8A	PRIMARY DNA REPLICATION GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	489-508	586-605							
PUL53_VZVD	PROBABLE DNA REPLICATION GENE 8 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	446-466	641-670							
PUL53_HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	173-188								
PUL53_HSV8U	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	64-80								
PUL60_HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-141								
PUL62_HCMVA	HYPOTHETICAL PROTEIN UL62	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	62-84	178-205							
PUL68_HCMVA	HYPOTHETICAL PROTEIN UL68	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	87-107								
PUL70_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	235-252	409-430	499-514	626-645	770-793				
PUL71_HCMVA	HYPOTHETICAL PROTEIN UL71	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	234-250								
PUL73_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	42-87								
PUL73_HSV8A	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	51-73								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-32								
PUL77_HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	268-291	607-628							
PUL78_HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	71-90	190-205							
PUL79_HCMVA	HYPOTHETICAL PROTEIN UL79	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	40-58								
PUL84_HCMVA	63 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	100-116								
PUL84_HCMVT	63 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	100-116								
PUL87_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	408-422	530-551							
PUL87_HCMVA	HYPOTHETICAL PROTEIN UL87	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	205-231	309-333	606-628	631-653	737-781				
PUL87_HSV8U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	301-322	507-529							
PUL87_HSV8A	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	185-207	407-422	578-595						
PUL88_HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	173-191	233-279							
PUL88_HSV8U	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	150-173								
PUL90_HCMVA	HYPOTHETICAL PROTEIN UL90	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-50								
PUL91_HSV8U	HYPOTHETICAL PROTEIN 8R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	42-65								
PUL92_HCMVA	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	78-99								
PUL92_HSV8U	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	36-55	100-119							
PUL94_HCMVA	PROTEIN UL94	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	49-70								
PUL95_EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	201-223								
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	508-526								
PUL95_HSV8U	HYPOTHETICAL PROTEIN 11R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	9-30	328-346							
PUL95_HSV8A	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-209								
PUL97_HCMVA	GANCICLOVIR KINASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208-228	541-567							
PUL4A_HCMVA	HYPOTHETICAL PROTEIN UL103	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	168-183								
PUL4A_HCMVA	PROTEIN UL103	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-47								
PUL4A_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	215-235	421-450							
PUL4A_HCMVA	HYPOTHETICAL PROTEIN UL106	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	93-118								
PUL4B_HCMVA	HYPOTHETICAL PROTEIN UL111	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-81								
PUL4B_HCMVA	HYPOTHETICAL PROTEIN UL112	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	298-319								
PUL4D_HCMVA	HYPOTHETICAL PROTEIN UL117	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	178-195								
PUL4E_HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-130								
PUL4I_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	128-153								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PULD2_HCMVA	HYPOTHETICAL PROTEIN UL132	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-22								
PUNG_FOWPI	URACIL-DNA GLYCOSYLASE	FOWLPOX VIRUS (STRAIN FP-1)	12-37								
PUNG_HSVEB	URACIL-DNA GLYCOSYLASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	224-250								
PUNG_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-103								
PUNG_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	82-103								
PUNG_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	82-103								
PUNG_VZVD	URACIL-DNA GLYCOSYLASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	217-243								
PUS03_HSVEB	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	48-63								
PUS03_HSVEK	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	48-63								
PUS03_PRVNJ	PROTEIN US2 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	120-136								
PUS03_HCMVA	HQLF1 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	24-39								
PUS05_HSV11	PUTATIVE GLYCOPROTEIN US5	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	53-70								
PUS05_HSV2	PUTATIVE GLYCOPROTEIN US5	HERPES SIMPLEX VIRUS (TYPE 2)	53-70								
PUS09_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-206								
PUS11_HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	98-113								
PUS12_HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	29-50	113-135	195-222						
PUS13_HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-33	208-231							
PUS14_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	236-260								
PUS15_HCMVA	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	378-402	443-466							
PUS16_HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151-174	243-267							
PUS17_HCMVA	HYPOTHETICAL PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	110-126								
PUS19_HCMVA	MEMBRANE PROTEIN HWLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-142	178-202	214-232						
PUS21_HCMVA	HYPOTHETICAL PROTEIN HWLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-67	155-182							
PUS22_HCMVA	EARLY NUCLEAR PROTEIN HWLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-292								
PUS23_HCMVA	HYPOTHETICAL PROTEIN HQLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	292-310								
PUS24_HCMVA	HYPOTHETICAL PROTEIN HQLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	352-373								
PUS28_HCMVA	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-49	140-160							
PUS28_HCMVT	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	34-49	140-160							
PUS29_HCMVA	HYPOTHETICAL PROTEIN HSDF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	246-269								
PUS30_HCMVA	HYPOTHETICAL PROTEIN HSDF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102-128	208-233							
PUS33_HCMVA	HYPOTHETICAL PROTEIN HSLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-59								
PV07K_LSV	7 KD PROTEIN	LILY SYMPTOMLESS VIRUS	27-46								
PV07K_NMV	7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	28-49								
PV07K_PVSP	7 KD PROTEIN	POTATO VIRUS X (PVX)	31-48								
PV07K_PVX	7 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	31-48								
PV07K_PVXXJ	7 KD PROTEIN	POTATO VIRUS X (STRAIN XC) (STRAIN CP)	31-48								
PV117_ASFL5	L15 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L15?)	73-94								
PV121_ASFL5	121 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	59-79								
PV12K_PVMR	12 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	79-96								
PV13K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	24-51								
PV143_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	79-102	846-863	1013-1037						
PV14K_BSMV	14 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	14-29	80-99							
PV18K_MLVAB	18 KD PROTEIN	ABELSON MURINE LEUKEMIA VIRUS	29-44	128-154							
PV19K_VACCV	PROTEIN B19	VACCINIA VIRUS (STRAIN WR)	114-132	152-172							
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	196-220	752-771							
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	747-767								
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	744-763								
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	775-800								
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	775-800								
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	774-799								
PV1A_PSVJ	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	472-493	783-808							
PV21K_HSVTH	33.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN H2)	176-191								
PV28K_PLRVI	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I) (	60-76	192-207							
PV28K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	60-76	192-207							
PV29K_BWYVF	29 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	22-43	136-157							
PV29K_PEBV	29.6 KD PROTEIN	PEA EARLY BROWNING VIRUS	114-132								
PV2A_BMV	2A PROTEIN	BROME MOSAIC VIRUS	285-303	759-777							

PCGENE	P32CTL32P	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	296-314									
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	234-255									
PV30K_TRVTC	29 1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	62-82									
PV31K_TOBSV	31 7 KD PROTEIN	TOBACCO STREAK VIRUS (STRAIN WC)	226-250									
PV362_ASFB7	K'362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	145-164									
PV375_ASFL5	LIS 375 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	114-135									
PV382_ASFL5	LIS 382 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	114-135									
PV3A_CCMV	COWPEA CHLOROTIC MOTTLE VIRUS		160-187									
PV3A_CMVFN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	214-235									
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	214-235									
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	214-235									
PV3A_CMVQ	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	214-235									
PV3A_CMVY	CUCUMBER MOSAIC VIRUS (STRAIN Y)		214-235									
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	5-28									
PV3A_IBVM	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	5-28									
PV3A_IBVPJ	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN PORTUGAL/322/82)	5-28									
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/183/66)	5-28									
PV3A_TAV	3A PROTEIN	TOMATO ASPERMY VIRUS	147-168									
PV58K_BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	320-340									
PV66K_BWYVF	PROTEIN 6B	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	97-116									
PV70K_TYMVA	69 KD PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	12-35									
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	44-59									
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-244									
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	217-244									
PVA04_VARV	PROTEIN A4	VARIOLA VIRUS	207-234									
PVA09_VACCC	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-66									
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	41-66									
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-44	140-159	299-317							
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	23-44	141-160	300-318							
PVA14_VACCC	PROTEIN A14	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-62									
PVA14_VARV	PROTEIN A14	VARIOLA VIRUS	39-62									
PVA16_VACCC	PROTEIN A16	VACCINIA VIRUS (STRAIN COPENHAGEN)	341-362									
PVA16_VARV	PROTEIN A16	VARIOLA VIRUS	340-361									
PVA18_VACCC	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	429-447									
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	429-447									
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	429-447									
PVA30_VACCC	PROTEIN A30	VACCINIA VIRUS (STRAIN COPENHAGEN)	107-131	193-209								
PVA30_VARV	PROTEIN A30	VARIOLA VIRUS	107-131	193-209								
PVA33_VARV	PROTEIN A33	VARIOLA VIRUS	58-82									
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	53-76									
PVA38_VARV	PROTEIN A38	VARIOLA VIRUS	53-76									
PVA32_VACCV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	205-220									
PVA32_VARV	PROTEIN A32	VARIOLA VIRUS	175-190									
PVA35_VACCC	PROTEIN A35 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	33-49									
PVA35_VACCV	PROTEIN A35 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	33-49	141-164								
PVA37_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-90									
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	66-90									
PVA40_VACCC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-30									
PVA41_VACCC	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-71									
PVA41_VACCV	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	47-71									
PVA41_VARV	PROTEIN A41 PRECURSOR	VARIOLA VIRUS	47-71									
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-79	201-220								
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	59-79	201-220								
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	59-79	201-220								
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	247-266	384-404								
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	247-266	384-404								
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS	56-75									

PCGENE	P12CTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA1	AREA2	AREA4	AREA1	AREA3	AREA2
PVALI_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	55-74								
PVALI_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	55-74								
PVALJ_BCTV	ALJ PROTEIN	BEET CURLY TOP VIRUS	82-108								
PVALJ_CLVK	ALJ PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-97								
PVALJ_CLVN	ALJ PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-97								
PVALJ_TYLCM	ALJ PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	78-97								
PVALJ_TYLCV	ALJ PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	77-97								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	134-157								
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	134-157								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	134-157								
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	134-157								
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	134-157								
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	134-157								
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	34-60								
PVAT_CERV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	141-161								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	132-159								
PVB02_VACCC	PROTEIN B2	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-170								
PVB02_VACCV	PROTEIN B2	VACCINIA VIRUS (STRAIN WR)	155-170								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)									
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	489-511								
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-511								
PVB05_VACCO	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	251-271								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	251-271								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	251-271								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	251-271								
PVB06_VACCV	PROTEIN B6	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	59-82								
PVB15_VACCC	PROTEIN B15	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVB15_VACCV	PROTEIN B15	VACCINIA VIRUS (STRAIN WR)	121-143								
PVB15_VARV	PROTEIN B15	VARIOLA VIRUS	121-143								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	157-179								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)									
PVBLI_CLVK	BLI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-51								
PVBLI_CLVN	BLI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-51								
PVBLI_SLCV	BLI PROTEIN	SQUASH LEAF CURL VIRUS	245-268								
PVBRI_ABMVW	BRI PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	166-191								
PVBRI_BGMV	BRI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-191								
PVBRI_PYMVV	BRI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	166-191								
PVBRI_SLCV	BRI PROTEIN	SQUASH LEAF CURL VIRUS	193-218								
PVC01_VACCC	PROTEIN C1	VACCINIA VIRUS (STRAIN COPENHAGEN)	70-90								
PVC01_VACCV	PROTEIN C1	VACCINIA VIRUS (STRAIN WR)	75-95								
PVC01_VARV	PROTEIN C1	VARIOLA VIRUS	58-78								
PVC02_SFVKA	HYPOTHETICAL PROTEIN C2	SHOPE FIBROMA VIRUS (STRAIN KASZA)	8-31								
PVC03_SFVKA	G-PROTEIN COUPLED RECEPTOR HOMOLOG C3	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-123	179-197							
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	182-209								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	183-208								
PVC06_SFVKA	HYPOTHETICAL PROTEIN C6	SHOPE FIBROMA VIRUS (STRAIN KASZA)	20-47								
PVC08_SFVKA	HYPOTHETICAL PROTEIN C8	SHOPE FIBROMA VIRUS (STRAIN KASZA)	14-30								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-59								
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	40-59								
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-109								
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-64								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	42-64								
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	42-64								
PVC16_VACCC	PROTEIN C16/B22	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-68								
PVC17_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	301-326								
PVC21_VACCC	PROTEIN C21/B27	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-28								
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-172	366-381	1072-1095						

PGENE	PIRCLUSTER	All Viruses [No Bacteriophage]	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	ENTITLE	VIRUS									
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	668-684	842-890	871-891						
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	283-302	338-384	1137-1152						
PVCAP_HSVEB	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	337-383	872-898							
PVCAP_HSV3A	MAJOR CAPSID PROTEIN	HERPES VIRUS 3 AINRI (STRAIN 11)	104-168	269-287	1062-1089						
PVCAP_PRV15	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	115-302	337-372	337-372						
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	381-401	891-910	1156-1176						
PVCD1_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	60-81								
PVDD1_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-39								
PVDD1_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-39								
PVDD1_VARV	PROTEIN D1	VARIOLA VIRUS	12-39								
PVDD1_FOWPI	91 6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	246-265	315-337							
PVDD1_SFVKA	PROTEIN D1	SHOPE FIBROMA VIRUS (STRAIN KASZA)	34-78	171-198							
PVDD1_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	320-340	694-714	715-734						
PVDD1_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	320-340	694-714	715-734						
PVDD1_VARV	PROTEIN D1	VARIOLA VIRUS	320-340	694-714	715-734						
PVDB1_CAMVC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	37-56								
PVDB1_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	37-56								
PVDB1_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D8C)	37-56								
PVDB1_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	37-56								
PVDB1_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	37-56								
PVED3_VACCC	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	70-97	335-380	540-558						
PVED3_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	70-97	335-380	540-558						
PVED3_VARV	PROTEIN E3	VARIOLA VIRUS	70-97	335-380	540-558						
PVED5_VACCC	PROTEIN E5	VACCINIA VIRUS (STRAIN COPENHAGEN)	314-329								
PVED5_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN DARIEN I)	324-339								
PVED5_VACCV	PROTEIN E5	VACCINIA VIRUS (STRAIN WR)	324-339								
PVED5_VARV	PROTEIN E5	VARIOLA VIRUS	324-339								
PVED6_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	430-451								
PVED6_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	430-451								
PVED6_VARV	PROTEIN E6	VARIOLA VIRUS	430-451								
PVEE8_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-270								
PVEE8_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	254-270								
PVEE8_VARV	PROTEIN E8	VARIOLA VIRUS	254-270								
PVE13_NPV16	PROBABLE E1 PROTEIN 2	HUMAN PAPILLOMAVIRUS TYPE 16	167-183								
PVE18_NPVAC	EARLY 10 5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	106-133								
PVE1_BPV1	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	265-282	317-333							
PVE1_BPV2	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 2	265-281	316-332							
PVE1_CRPVK	E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	7-22								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	258-275	311-334							
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	308-324								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	264-281	317-333	344-364						
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	237-254								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	238-260								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	310-354								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	263-280								
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	304-320								
PVE1_HPV56	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 56	238-260								
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	238-255	311-334							
PVE1_HPV1	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	257-274	110-126							
PVE1_RPV1	E1 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	316-309								
PVE1_CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	108-333								
PVE2_BPV11	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	281-310								
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	295-320								
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	318-306								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	284-300								
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	111-336								
PVE2_HPV31	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	284-312								

PCGENE	PRICTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVE3_HPV33	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	275-293								
PVE3_HPV35	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	289-307								
PVE3_HPV39	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	292-310								
PVE3_HPV42	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	321-338								
PVE3_HPV57	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	307-328								
PVE3_HPV68	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	286-310								
PVE3_PAPVD	PROBABLE E3 PROTEIN	DEER PAPILLOMAVIRUS	333-351								
PVE3_PCPVI	E3 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	299-320								
PVE3_RHPVI	E3 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	298-318								
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	39-59								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	56-76								
PVE4_HPV51	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	59-83								
PVE4_RHPVI	PROBABLE E4 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	63-87								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-42								
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	19-42								
PVE5_BPVI	E5 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1, AND TYPE 2	2-26								
PVE5_HPV13	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	39-62								
PVE5_HPV31	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	31-53								
PVE5_HPV42	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	45-65								
PVE5_HPV51	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	31-52								
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	89-113								
PVE5_RHPVI	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	109-132								
PVE6_BPVI	E6 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	23-41								
PVE6_CRPVK	E6 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	6-23								
PVE6_HPV06	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6	133-151								
PVE6_HPV2A	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	8-27								
PVE6_HPV33	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	9-26								
PVE6_HPV35	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	9-26								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	9-26								
PVE6_HPV57	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	8-27								
PVE6_HPV58	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	9-26								
PVE6_MMPV	E6 PROTEIN	MICROMYS MINUTUS PAPILLOMAVIRUS	7-33	36-60							
PVE7_CRPVK	E7 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	71-88								
PVE7_HPV13	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	77-93								
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-87								
PVE7_HPV6B	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	20-37								
PVE7_RHPVI	E7 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	79-105								
PVEM_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	78-99	203-222							
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	154-175	237-260	677-696						
PVENV_BEV	ENVELOPE PROTEIN	BERNE VIRUS	62-86	87-114							
PVENV_DHVII	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61)	42-57	484-511							
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	25-41								
PVENV_LELV	PROBABLE ENVELOPE PROTEIN	LELYSTAD VIRUS	27-47	148-168							
PVENV_MCVI	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1	61-80								
PVENV_MCVI	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2	61-80	306-333							
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	196-221	356-383	473-491						
PVETM_NPVAC	ECORI-T SITE PROTEIN ETM	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	82-105								
PVF05_VACCC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	280-305								
PVF05_VACCP	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	280-305								
PVF05_VACCV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	281-306								
PVF05_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	280-305								
PVF09_VACCC	PROTEIN F9	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	176-200								
PVF09_VACCV	PROTEIN F9	VACCINIA VIRUS (STRAIN WR)	176-200								
PVF09_VARV	PROTEIN F9	VARIOLA VIRUS	176-200								
PVF11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	161-184								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	161-184								
PVF15_VACCC	PROTEIN F15	VACCINIA VIRUS (STRAIN COPENHAGEN)	25-48								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage)									
TITLE/RANGE	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVF11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	3-26								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	28-51								
PVFP1_FOWPV	PROTEIN FP1	FOWLPOX VIRUS	397-323								
PVFP2_FOWPV	PROTEIN FP2	FOWLPOX VIRUS	88-104								
PVFP7_CAPVK	PROTEIN F7	CAPRIPOX VIRUS (STRAIN KS-1)	89-111								
PVFP8_FOWPV	PROTEIN FP8	FOWLPOX VIRUS	65-90								
PVFP8_CAPVK	C7A PROTEIN	CAPRIPOX VIRUS (STRAIN KS-1)	51-76								
PVFU5_ORFVZ	10 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	39-48								
PVFU5_VACCA	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR 65-16)	32-54								
PVG01_HSV2B	HYPOTHETICAL GENE 1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	169-193								
PVG01_HSV11	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1	210-223	317-339	389-416						
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	298-318	376-395							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	277-297	315-334							
PVG01_VARV	PROTEIN G1	VARIOLA VIRUS	298-318	376-395							
PVG01_VZVD	HYPOTHETICAL GENE 1 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	38-82								
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	50-72								
PVG01_VARV	PROTEIN G1	VARIOLA VIRUS	30-72								
PVG04_VACCC	PROTEIN G4	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-33								
PVG04_VARV	PROTEIN G4	VARIOLA VIRUS	11-33								
PVG06_VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-51								
PVG06_VARV	PROTEIN G6	VARIOLA VIRUS	31-51								
PVG08_HSV11	HYPOTHETICAL GENE 8 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	134-149	159-185							
PVG10_HSV11	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	35-54								
PVG10_HSV2A	HERPESVIRUS SAIMIRI	HERPESVIRUS SAIMIRI (STRAIN 11)	109-124	355-379							
PVG11_HSV11	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	103-123	136-176							
PVG13_HSV11	HYPOTHETICAL GENE 13 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	151-178	276-286							
PVG13_HSV2A	HYPOTHETICAL GENE 13 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-92								
PVG19_HSV11	HYPOTHETICAL GENE 19 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	88-112								
PVG1L_ABEPV	G1L PROTEIN	ABALACTA MOOREI ENTOMOPOXVIRUS	313-336								
PVG1_SPV1R	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-ROA2 B	36-92	659-678							
PVG22_HSV11	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	300-317								
PVG23_HSV11	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1	114-133								
PVG27_HSV11	HYPOTHETICAL GENE 27 PROTEIN	ICTALURID HERPESVIRUS 1	138-154								
PVG27_HSV2A	HYPOTHETICAL GENE 27 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-226								
PVG28_HSV11	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	173-197	491-518							
PVG28_HSV2A	HYPOTHETICAL GENE 28 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	14-40								
PVG29_HSV11	HYPOTHETICAL GENE 29 PROTEIN	ICTALURID HERPESVIRUS 1	30-42								
PVG30_HSV11	HYPOTHETICAL GENE 30 PROTEIN	ICTALURID HERPESVIRUS 1	166-181								
PVG30_VZVD	GENE 30 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	90-109								
PVG34_HSV2A	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	108-123	144-162							
PVG37_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	284-299								
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	648-675	970-990	1018-1065						
PVG40_HSV11	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1	14-32								
PVG41_HSV11	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1	11-38	62-81	244-260						
PVG43_HSV11	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1	109-133	157-178	222-245	521-538					
PVG44_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	134-156	580-607	937-963	1244-1270					
PVG48_HSV11	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1	71-91								
PVG50_HSV2A	PROB TRANSCRIPTION ACTIVATOR EDAF1	HERPESVIRUS SAIMIRI (STRAIN 11)	5-30	58-83							
PVG51_HSV11	HYP GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	29-49	84-102							
PVG52_HSV11	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1	228-252								
PVG53_HSV11	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1	22-37	143-158	218-309						
PVG55_HSV2A	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	85-106								
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	1155-1176								
PVG58_HSV2A	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-144	366-388	393-319	330-346					
PVG59_HSV11	HYP GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	142-161	267-289							
PVG5_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	42-64								
PVG60_HSV11	HYPOTHETICAL GENE 60 PROTEIN	ICTALURID HERPESVIRUS 1	30-51	53-75							

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVG61_HSV11	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1	76-102	117-136							
PVG63_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	238-259	336-363							
PVG64_HSV11	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	420-445								
PVG65_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	117-137	155-173	362-378	518-533	1147-1174	1347-1369			
PVG67_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	108-132	171-188	318-344	722-745	1005-1029	1072-1091	1315-1341		
PVG6_SPV1R	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	60-82								
PVG70_HSV11	HYPOTHETICAL GENE 70 PROTEIN	ICTALURID HERPESVIRUS 1	184-209								
PVG71_HSV8A	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	89-105								
PVG72_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	445-471	535-561	720-744	1252-1269					
PVG74_HSV8A	G-PROTEIN COUPLED REC HOMOLOG ECRF3	HERPESVIRUS SAIMIRI (STRAIN 11)	124-151								
PVG9_SPV1R	GENE 9 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	57-72								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1587-1606	1856-1877	2108-2127	2210-2226	2788-2806	2973-2999	3073-3090	3120-3145	3374-3399
			3601-3625								
PVGH0_HCMVA	GLYCOPROTEIN H301 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	157-178								
PVGL1_CVPRJ	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004/UKITISH15	174-193								
PVGL3_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL3_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	123-139	174-190	264-279	651-674	991-1017	1259-1280			
PVGL3_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL3_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL3_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	31-47	123-139	174-190	264-279	991-1017	1259-1280			
PVGL3_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL3_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	768-794	1053-1071	1115-1134						
PVGL3_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	95-111	999-1025	1267-1290	1317-1338					
PVGL3_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	95-111	947-973	1215-1238	1265-1286					
PVGL3_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	95-111	999-1025	1267-1290	1317-1338					
PVGL3_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	95-111	858-884	1126-1149	1176-1197					
PVGL3_CVPF8	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	800-816	1038-1064	1274-1297				
PVGL3_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	506-521	800-816	1038-1064	1274-1297			
PVGL3_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL3_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL3_CVPRS	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH I	218-233	576-592	814-840	1050-1073					
PVGL3_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	218-233	576-592	814-840	1050-1073					
PVGL3_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL3_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	803-819	1041-1067	1277-1300						
PVGL3_IBV6	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	196-219	588-607	771-797	1056-1081	1094-1111				
PVGL3_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	195-218	587-606	770-796	1055-1080					
PVGL3_IBVD2	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274) (	196-219	588-607	771-797	1056-1081					
PVGL3_IBVD3	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D3896)	196-219								
PVGL3_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	195-218	587-606	770-796	1055-1080					
PVGL3_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	195-218	378-398	587-606	770-796	1055-1080				
PVGL3_IBVU1	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/123/82)	178-201								
PVGL3_IBVU2	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/142/86)	178-201								
PVGL3_IBVU3	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/167/84)	178-201								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	732-752								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-558	706-732	750-777						
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	536-559	707-733	751-778						
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-104								
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	82-103								
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	82-103								
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	83-104								
PVGLB_HSV2J	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	79-99								
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	79-99								
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAB)	65-85								
PVGLB_HSV6U	GLYCOPROTEIN B (FRAGMENT)	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-92	117-144							
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	560-578	689-707							
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV) (BOVINE MAMMILLITIS	279-299	745-767							
PVGLB_HSVBC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	692-710								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A) (EHV-1)	736-753								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	675-692								
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	736-753								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	736-753								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	736-753								
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	589-613								
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	483-506	584-602	701-716						
PVGLB_ILTV6	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 632)	256-275	597-621	740-758						
PVGLB_ILTVS	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2)	266-285	607-631	750-768						
PVGLB_ILTVT	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	266-285	607-631	750-768						
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-156	566-589	738-765						
PVGLB_PRVIF	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	203-218								
PVGLB_VZVD	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	522-538								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	3-22	467-493							
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	3-22	467-493							
PVGLC_HSV2	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	435-458								
PVGLC_HSV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN J3))	436-459								
PVGLC_HSVBC	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-494								
PVGLC_HSVE4	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	444-459								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KENTUCK	427-442								
PVGLC_HSVMD	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN HC-1)	399-421								
PVGLC_HSVMD	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	399-421								
PVGLC_HSVMG	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	398-420								
PVGLC_HSVMM	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	399-421								
PVGLC_PRVIF	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	180-197	446-472							
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	431-449								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	431-449								
PVGLD_HSV11	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17), AND (TYPE 1 / STRAIN	79-94								
PVGLD_HSV2	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	79-94								
PVGLE_HSV11	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	104-129	413-437							
PVGLE_VZVD	GLYCOPROTEIN E PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	469-493								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	205-221	265-287	482-504						
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	205-221	265-280	484-506						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	205-221	265-280	484-506						
PVGLF_CDVD	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	336-361	398-414	562-589						
PVGLF_HRSV1	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 185	205-221	265-280	484-506						
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	205-221	265-280	484-506						
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LO	205-221	265-280	484-506						
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	205-221	265-280	484-506						
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)and (STRAIN HALLE)	224-245	286-302	451-477						
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-J-CA)	227-248	289-305	454-480						
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-245	286-302	451-477						
PVGLF_MUMP1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-20	276-292	446-467						
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	276-292	446-467							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	276-292	446-467							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-20	276-292	446-467						
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	273-289								
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	273-289								
PVGLF_NDVH3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	273-289								
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	273-289								
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	273-289								
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	273-289								
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	273-289								
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	273-289								
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	273-289								
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	273-289								
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	269-285	305-326	367-383	531-558					

PCGENE	P1JCTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_PI1HC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-477								
PVGLF_PI3H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	450-471								
PVGLF_PI2H0	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	450-471								
PVGLF_PI2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIBA)	450-471								
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	405-426	453-474							
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	2-20	283-310	453-474						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	220-241	282-298	447-473						
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	220-241	282-298	447-473						
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-481								
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-481								
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-481								
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-481								
PVGLF_SEND2	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-481								
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	453-474								
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN WJ)	401-425	446-467							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	175-191	452-474							
PVGLO_IHNV	SPIKE GLYCOPROTEIN PRECURSOR	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	77-99								
PVGLO_RABVE	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN ERA)	454-474								
PVGLO_RABVH	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN HEP-FLURY)	372-391	454-474							
PVGLO_RABVP	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN PV)	454-474								
PVGLO_RABVS	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN SAD B19)	454-474								
PVGLO_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	454-474								
PVGLO_TRTV	MAJOR SURFACE GLYCOPROTEIN G	TURKEY RHINOTRACHEITIS VIRUS	199-216								
PVGLO_VHSV0	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	406-428								
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	211-237	365-382	574-598	691-712					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	210-236	364-381	573-597	690-711					
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	245-262	443-467	803-827						
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	245-262	443-467	803-827						
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	314-332								
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	304-325	814-839							
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)and (ISOLATE HVS2SA)	297-318	807-832							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	454-479	658-679							
PVGLH_MCMVS	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	670-690								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-180								
PVGLI_HSV11	GLYCOPROTEIN I	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	43-60								
PVGLI_HSVEB	GLYCOPROTEIN I PRECURSOR	EQUINE HERPESVIRUS TYPE 1	44-63								
PVGLI_VZVD	GLYCOPROTEIN I	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	278-297								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	117-136	197-222							
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	31-55	81-98	190-211	1325-1345	1387-1410				
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	31-55	81-98	190-211	1325-1345	1387-1410				
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	193-218	1379-1404							
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS									
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	355-371	692-717	900-915	999-1019					
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	499-515	694-718	1000-1020						
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	499-515	694-719	1001-1021						
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	499-515	694-719	1001-1021						
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	18-44	269-293	348-367	531-551	815-841				
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	152-171								
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	743-765	997-1016	1275-1302						
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	155-174	509-525	712-729						
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	155-174	509-525	712-729	1092-1117					
PVGLM_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS	53-80	344-368	830-856						
PVGLM_RVFV2	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	53-80	344-368	830-856	1156-1176					
PVGLM_SEOU8	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	355-371	692-717	900-915	999-1019					
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	355-371	693-718	901-916	1000-1020					
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11) (SAPPORO RAT VIRUS)	355-371	692-717	900-915	999-1019					
PVGLM_UUK	M POLYPROTEIN PRECURSOR	UUKUNIEMI VIRUS	561-583	635-674	826-842	925-952	966-989				

PCGENE	P1SCTL2.IP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	430-452	869-885	1099-1124	1546-1568					
PVGLX_HSVEB	GLYCOPROTEIN X PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)									
PVGLX_HSVEK	GLYCOPROTEIN GX PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)									
PVGLX_HSVEL	GLYCOPROTEIN GX	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)									
PVGLX_PRVRJ	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN RICE)	149-176								
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	12-38								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	12-38	237-258	426-448						
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	12-35	238-259	427-449						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	12-35								
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	12-35	89-108							
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	12-35	425-447							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-38	441-466							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-38								
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	12-38								
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	12-38								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-38								
PVGNB_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	141-161	569-594	757-783	1110-1135	1165-1184				
PVGNM_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS	311-335	741-764							
PVGP2_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	657-681								
PVGP3_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	854-878								
PVGP8_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-88								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	34-52	537-561	653-675						
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	538-562	607-627							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	538-562	607-627							
PVH01_VACCC	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-92	105-121							
PVH01_VACCV	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN WR)	76-92	105-121							
PVH01_VARV	PROTEIN-TYROSINE PHOSPHATASE	VARIOLA VIRUS	76-92	105-121							
PVH07_VACCV	LATE PROTEIN H7	VACCINIA VIRUS (STRAIN WR)	70-97								
PVH07_VARV	LATE PROTEIN H7	VARIOLA VIRUS	70-97								
PVHEL_FXMV	PROBABLE HELICASE	FOXTAIL MOSAIC VIRUS	182-205								
PVHEL_PMV	PROBABLE HELICASE	PAPAYA MOSAIC POTEXVIRUS	153-168								
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	120-135								
PVI01_VARV	PROTEIN I1	VARIOLA VIRUS	120-135								
PVI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	194-220								
PVI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	194-220								
PVI03_VARV	PROTEIN I3	VARIOLA VIRUS	194-220								
PVI06_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	106-128	133-155							
PVI06_VARV	PROTEIN I6	VARIOLA VIRUS	106-128	133-155							
PVI07_VACCC	PROTEIN I7	VACCINIA VIRUS (STRAIN COPENHAGEN)	13-34	344-367							
PVI07_VACCV	PROTEIN I7	VACCINIA VIRUS (STRAIN WR)	13-34	344-367							
PVI07_VARV	PROTEIN I7	VARIOLA VIRUS	13-34	344-367							
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	196-212	418-438							
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	196-212	418-438							
PVI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	196-212	418-438							
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-100	333-350							
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	77-100	333-350							
PVIE2_HCMVA	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	14-32	389-406							
PVIE2_HCMVT	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32	388-405							
PVIE2_MCMVS	IMMEDIATE-EARLY PROTEIN 2	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	251-272								
PVIE3_HCMVT	30 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32								
PVIEG_HSVSA	IMMEDIATE-EARLY PROTEIN IE-G	HERPESVIRUS SAIMIRI (STRAIN 11)	65-80								
PVIEN_NPVAC	IMMEDIATE-EARLY REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	100-116	273-290							
PVIMP_EBV	PROB INTEGRAL MEMBRANE PROTEIN BBRF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	75-100	125-152	203-222						
PVIMP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-89	190-217							
PVIMP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-110	250-270							
PVIMP_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	24-49	93-120	145-172	247-263	301-321	332-358			
PVIMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-101	313-331							

PCGENE	P12CTL2IP	All Viruses (No Bacteriophage)									
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVIMP_VZVD	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	21-47	154-181	230-252						
PVJ01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-110								
PVJ01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	89-110								
PVJ01_VARV	PROTEIN J1	VARIOLA VIRUS	89-110								
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-113	208-234	319-337						
PVK04_VACCV	PROTEIN K4	VACCINIA VIRUS (STRAIN WR)	87-113	208-234	319-337						
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	106-133								
PVL02_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-61								
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-61								
PVL02_VARV	PROTEIN L2	VARIOLA VIRUS	39-61								
PVL03_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	148-164	186-208	292-315						
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	148-164	186-208	292-315						
PVL03_VARV	PROTEIN L3	VARIOLA VIRUS	147-163	185-207	291-314						
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	16-39								
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-39								
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SILOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	299-317								
PVL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	28-55								
PVL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	38-63								
PVL1_REOVD	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	327-346	351-366	752-774						
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	254-270								
PVL2_HPV11	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	32-58								
PVL2_HPV13	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	33-59								
PVL2_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	34-60								
PVL2_HPV18	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	33-59								
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	213-228								
PVL2_HPV2A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	88-114								
PVL2_HPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	34-60	443-462							
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-59	99-114							
PVL2_HPV35	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	34-60								
PVL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	39-58	414-436							
PVL2_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	33-59	344-370							
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	250-265								
PVL2_HPV57	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	32-58								
PVL2_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-59	99-114							
PVL2_HPV6B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	33-59								
PVL2_PAPVE	PROBABLE L2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	30-56								
PVL2_RHPV1	PROBABLE L2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	45-71								
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	6-28								
PVL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING	714-737								
PVL3_REOVJ	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	714-737	1213-1236							
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	714-737								
PVL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-170	196-220	686-711	845-861					
PVM01_VACCC	PROTEIN M1	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-159	177-195	281-302						
PVM01_VACCV	PROTEIN M1	VACCINIA VIRUS (STRAIN WR)	83-108	126-144	230-251						
PVM01_VARV	PROTEIN M1	VARIOLA VIRUS	81-106	124-142	228-249						
PVM1_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING)	141-168	227-245	280-304	324-347	414-436	454-477			
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	141-168	227-245	280-304	414-436	454-477				
PVM21_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192								
PVM22_REOVD	MAJOR VIRION STRUCT PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192								
PVM2_REOVJ	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	168-192								
PVM2_REOVL	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-192								
PVMO_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	304-326	521-540							
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	37-62								
PVMAT_CDVO	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	148-165	283-309							
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	44-62	139-160							
PVMAT_LPMV	MATRIX PROTEIN	LA PIEDAD-MICHOACAN-MEXICO VIRUS	311-338								
PVMAT_MEASE	MATRIX PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	283-309								

PCGENE	P13CTLZIP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMAT_MEASH	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HALLE)	283-309								
PVMAT_MEASI	MATRIX PROTEIN	MEASLES VIRUS (STRAIN IP-3-CA)	87-111								
PVMAT_MEASU	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HU2)	283-309								
PVMAT_MUMP1	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	191-207	227-250	310-330						
PVMAT_MUMPS	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL)	191-207	227-250	310-330						
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	135-151	190-208	309-329						
PVMAT_NDVB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	135-151	190-208	309-329						
PVMAT_PI1HC	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	195-217								
PVMAT_PI2HT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIDA) (PIV-2)	132-154	189-205	308-328						
PVMAT_PI4HA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	312-332								
PVMAT_PI4HB	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	312-332								
PVMAT_RINDK	MATRIX PROTEIN	RINDERPEST VIRUS (STRAIN KABETE O)	200-221	239-260	283-309						
PVMAT_SENDF	MATRIX PROTEIN	SENDAI VIRUS (STRAIN FUSHIMI)	195-217								
PVMAT_SENDH	MATRIX PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	195-217								
PVMAT_SENDZ	MATRIX PROTEIN	SENDAI VIRUS (STRAIN Z)	195-217								
PVMAT_SSPVB	MATRIX PROTEIN	SUBACUTE SCLEROSING PANENCEPHALITIS VIRUS (STRAIN BIKEN)	283-309	314-338							
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	132-154	189-205	308-328						
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3)	98-114	132-148	308-335						
PVMAT_SVCV	MATRIX PROTEIN	SPRING VIREMIA OF CARP VIRUS (RHABDOVIRUS CARPIA)	141-167								
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS	122-143								
PVMEI_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	9-36	137-161	171-190						
PVMEI_CVH22	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN 229E)	136-155								
PVMEI_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	9-36	64-85	137-161						
PVMEI_CVMA5	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	10-37								
PVMEI_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	10-37								
PVMEI_CVPFS	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	174-193								
PVMEI_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	169-193	174-193							
PVMEI_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	174-193								
PVMEI_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	9-36	137-161	171-190						
PVMEI_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	74-98								
PVMEI_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	74-101								
PVMEI_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42)	74-101								
PVMEI_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	74-98								
PVMEM_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	131-157	178-203							
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	118-134	147-164	183-201						
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	118-134	147-164	183-201						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	118-134	147-164	183-201						
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	118-134	147-164	183-201						
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	118-134	147-164	183-201						
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	118-134	147-164	183-201						
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	293-318								
PVMP_FMVD	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	115-131	180-198							
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-147	273-299							
PVMSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	201-228	269-295							
PVMSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	194-221	268-294							
PVMSA_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	157-184	231-257							
PVMSA_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	194-221	269-295							
PVMSA_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	209-236	271-295	380-395						
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	236-262	293-320							
PVMSA_HPBV0	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	11-28	70-96							
PVMSA_HPBV2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	185-202	244-270							
PVMSA_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	185-202	244-270							
PVMSA_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-270								
PVMSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	174-191	233-259							
PVMSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	11-28	70-96							
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-259								
PVMSA_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	174-191	233-259							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMSA_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE	174-191	233-259							
PVMSA_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADR / STRAIN NC-1)	11-28	70-96							
PVMSA_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	174-191	233-259							
PVMSA_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	185-202	244-270							
PVMSA_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	185-202	244-270							
PVMSA_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	11-28	70-96							
PVMSA_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	174-191	233-259							
PVMSA_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	174-191	233-259							
PVMSA_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	174-191	233-259							
PVMSA_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-234	269-293	378-393						
PVMSA_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	212-239	274-298	383-398						
PVMSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-239	274-298	383-398						
PVMSA_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-239	274-298	383-398						
PVMSA_WHV8I	PROB MAJOR SURFACE ANTIGEN PREC	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	212-239	274-298	383-398						
PVMSA_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS23)	125-149	234-249							
PVMT2_IAANN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	25-46								
PVMT2_IABAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	25-46								
PVMT2_IAFOW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	25-46								
PVMT2_IAFPR	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	25-46								
PVMT2_IAFPW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	25-46								
PVMT2_IALE1	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	25-46								
PVMT2_IALE2	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	25-46								
PVMT2_IAMAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	25-46								
PVMT2_IAPUE	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	25-46								
PVMT2_IASIN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	25-46								
PVMT2_IAUDO	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	25-46								
PVMT2_IAWIL	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	25-46								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	226-241								
PVNS4_ROTBS	NONSTRUCTURAL PROTEIN NS34	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	334-351								
PVNBP_PVSP	10 7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	21-36								
PVNB_INBBE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	13-39								
PVNB_INBHK	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	13-39								
PVNB_INBLE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	13-39								
PVNB_INBLN	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	13-39								
PVNB_INBMD	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	13-39								
PVNB_INBMF	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/89)	13-39								
PVNB_INBOR	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	13-39								
PVNCS_ADVG	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	81-96	169-190							
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002) (AEDES DENS	675-690								
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	575-597								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	140-165								
PVNS1_AHSV4	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	256-272								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	31-50	114-137	167-192						
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	31-50	114-137	167-192						
PVNS1_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	19-38								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	31-50	114-137	167-192						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-50	167-192							
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	28-47	164-189							
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	31-50	167-192							
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	28-47	164-189							
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	28-47	164-189							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	31-50	114-137	167-192						
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND(STRAIN A/	31-50	114-137	167-192						
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	31-50	167-192							
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	31-50	114-137	167-192						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	31-50	114-137	167-192						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	31-50	167-192							

PCGENE	P12CTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	31-50	167-192							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	31-50	167-192							
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MYNAH/HANEDA-THAI/76)	28-47	164-189							
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	167-192								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	31-50	167-192							
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	31-50	167-192							
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	31-50	167-192							
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	31-50	114-137	167-192						
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/	31-50	167-192							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	31-50	167-192							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	31-50								
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	28-47	164-189							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	31-50	167-192							
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	31-50	114-137	167-192						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	31-50	114-137	167-192						
PVNS1_IAZJI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	31-50	167-192							
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-248								
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-248								
PVNS2_BTV10	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV17	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV1S	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	145-161								
PVNS2_BTV1X	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	145-161								
PVNS2_EHDV2	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AL	145-161								
PVNS2_IAPUE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-28								
PVNS2_IATRS	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	56-80								
PVNS2_PVM	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	52-68								
PVNS3_CVPFS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	177-201								
PVNS3_CVPPU	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	98-122								
PVNS3_CVPRM	NONSTRUCTURAL PROTEIN 3-1	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	177-201								
PVNS3_RSV	NONSTRUCTURAL PROTEIN NS3	RICE STRIPE VIRUS	16-40								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	84-100								
PVNS4_CVMS	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-38								
PVNS4_CVPFS	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	4-31								
PVNS4_MSTV	NONSTRUCTURAL PROTEIN NS4	MAIZE STRIPE VIRUS	41-56								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	41-56	60-82	152-167						
PVNS7_CVFEJ	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	59-84								
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	59-84								
PVNSC_PI1HB	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	76-92								
PVNSC_PI1HC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	76-92								
PVNSC_PI1HD	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	76-92	179-197							
PVNSC_PI1HE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	76-92								
PVNST_CVBQ	32 KD NONSTRUCTURAL PROTEIN	BOVINE CORONAVIRUS (STRAIN QUEBEC)	88-109								
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-248								
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-248								
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-248								
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-248								
PVNST_PTPV	NONSTRUCTURAL PROTEIN NS-S	PUNTA TORO PHLEBOVIRUS	48-63								
PVNST_SFSV	NONSTRUCTURAL PROTEIN NS-S	SANDFLY FEVER SICILIAN VIRUS	16-34								
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS	52-73	89-104							
PVNUA_PRVKA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	756-777	1563-1583							
PVNUC_DHVII	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61)	123-139	297-324							
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	159-176								
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	173-197	266-287							
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	173-197								
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	173-197								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	173-197								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	173-197								
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	173-197								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	173-197								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80	173-197								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	173-197								
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	173-197								
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	173-197								
PVNUC_IADE2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	173-197								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	173-197								
PVNUC_IADM2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	173-197								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	173-197								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	173-197								
PVNUC_IADU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	173-197								
PVNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	173-197								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	173-197								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	173-197								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTC	173-197								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	173-197								
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	173-197								
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	173-197								
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	173-197								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	173-197								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	173-197								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	173-197								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	173-197								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	173-197								
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	173-197								
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	173-197								
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	173-197								
PVNUC_IAHM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	173-197								
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	173-197								
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	173-197								
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	173-197								
PVNUC_IAHTB	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	173-197								
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	173-197								
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	173-197								
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	173-197								
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	173-197								
PVNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	173-197								
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	173-197								
PVNUC_IAOH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	173-197								
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	173-197								
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	173-197								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/	173-197								
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	173-197								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	173-197								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	173-197								
PVNUC_IATE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	173-197								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	173-197								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	173-197								
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	173-197								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	173-197								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	173-197								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	173-197								
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	173-197								
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	173-197								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS									
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/AAINE/2/1984)	173-197								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/1/1976)	173-197								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	173-197								
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/77)	173-197								
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/69)	173-197								
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/75)	173-197								
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	173-197								
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	173-197								
PVNUC_IAZHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	173-197								
PVNUC_IAZHJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JILIN/ KJANG/12/82)	173-197								
PVNUC_IAZII	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1/1930)	173-197								
PVNUC_IAZIJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	173-197								
PVNUC_IAZIJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	173-197								
PVNUC_IAZIJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1979/9)	173-197								
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	173-197								
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MARYLAND/1/54)	173-197								
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/10/85)	173-197								
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/2/81)	173-197								
PVNUC_IAZWI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	173-197								
PVNUC_IAZWJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	173-197								
PVNUC_IBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	234-258								
PVNUC_IBBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	234-258								
PVNUC_IBBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	234-258								
PVNUC_IBSI	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	234-258								
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-39	141-158							
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-39	141-158							
PVOD1_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	188-204	242-262	336-358						
PVOD1_VAAV	PROTEIN O1	VARIOLA VIRUS	188-204	242-262	336-358						
PVOR1_FOAV	132 KD PROTEIN	FOXTAIL MOSAIC VIRUS	846-865								
PVOR1_NAV	194 KD PROTEIN	NARCISSUS MOSAIC VIRUS	409-424	990-1010							
PVOR1_PVSA	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	87-104	986-1009	1231-1270	1893-1909					
PVOR1_PVSP	223 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	279-295								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	128-153	234-256	306-322	1010-1030					
PVOR1_PVXCP	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	128-153	234-256	306-322	385-404.	1010-1030				
PVOR1_PVXJU	165 KD PROTEIN	POTATO VIRUS X (STRAIN JU)	128-153	234-256	306-322	1010-1030					
PVOR1_SMYEA	150 KD PROTEIN	OS STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	121-146	155-175							
PVOR1_WCMVM	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	121-146								
PVOR1_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	121-146	408-430							
PVPO3_HSV5A	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	424-446	463-486	531-575	579-593	1031-1072				
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-28	42-59							
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	4-31								
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	33-58	52-77	105-129	195-214	260-283	504-528			
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS	31-49	52-77	105-129	195-214	260-283	504-528			
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	90-107	265-291							
PVP14_EBV	PROBABLE MEMBRANE ANTIGEN P140	EPSTEIN-BARR VIRUS (STRAIN B95-8)	694-715	857-879	1124-1145						
PVP19_EBV	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	EPSTEIN-BARR VIRUS (STRAIN B95-8)		346-364							
PVP19_HCMVA	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-101	122-149	208-216						
PVP19_HSV5A	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HERPESVIRUS SAIMIRI (STRAIN 11)	238-265								
PVP19_VZVD	CAPSID ASSEMBLY AND DNA MATUR PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	5-31								
PVP1_SSV1	STRUCTURAL PROTEIN VP1 PRECURSOR	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	8-35								
PVP21_AMCV	CORE PROTEIN P21	ARTICHOKE MOTTLED CRINKLE VIRUS	37-63								
PVP21_CNV	CORE PROTEIN P21	CUCUMBER NECROSIS VIRUS	40-65								
PVP21_CRV	CORE PROTEIN P21	CYMBIDIUM RINGSPOT VIRUS	40-63								
PVP21_TBSVC	CORE PROTEIN P21	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	40-63								
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-165	187-202	261-282						
PVP23_HSV11	CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	197-220								
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	206-232								

PCGENE	P1ICTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-132								
PVP26_NPVAC	P26 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	12-31	58-76	117-141						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	868-891	974-994							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2.	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	361-381	399-424	564-586	829-849					
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	361-381	399-424	829-849						
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	362-382	420-438	617-632	657-676					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	361-381								
PVP2_BTVIA	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	420-438	654-681							
PVP2_BTVIS	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-31	117-140	420-438	654-681					
PVP2_EHDVI	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	153-168	229-252							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	301-317	334-360	522-543	673-690	764-789				
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	301-317	334-360	523-544	765-790					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	309-325	342-363	532-553	674-700	774-799				
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	51-75	303-319	408-425	514-535	665-691				
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	34-57	219-240	302-318	335-361	523-544	674-700	765-790		
PVP30_MABVP	MINOR NUCLEOPROTEIN VP30	MARBURG VIRUS (STRAIN MUSOKE)	50-75								
PVP32_ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	174-197								
PVP35_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	233-256								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	49-75	78-104							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	49-75	78-104							
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-304								
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-304								
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-305								
PVP38_HSVMG	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	255-270								
PVP38_HSVMN	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD11/75C/R2)	255-270								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	296-311								
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	107-134	214-240	295-316						
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4/STRAIN VACCINE)	65-85	126-147	215-230	845-862					
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	123-144	212-227							
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	123-144	212-227							
PVP3_BTVIA	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	123-144	212-227							
PVP3_EHDVI	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	121-142	671-695							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2/STRAIN AUS	121-142	675-695							
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	89-108	340-360	367-393	690-717	742-768	748-768	960-975		
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	405-429								
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	401-425	426-444	512-536	796-822					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	429-454								
PVP40_HSV11	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	141-168	472-492							
PVP40_HSVEB	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	50-67	95-119	483-504						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	342-368								
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	506-528								
PVP40_MABVM	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN MUSOKE)	95-110								
PVP40_MABVP	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN POPP)	95-110								
PVP40_NPVBM	STRUCTURAL GLYCOPROTEIN P40	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	223-242	256-272							
PVP40_VZVD	CAPSID PROTEIN VP24	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	47-64								
PVP41_NPVAC	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	229-248	262-278							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	483-508								
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	395-411	483-508							
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	14-38								
PVP48_NPVOP	P48 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	136-157								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	273-288								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	331-358								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	331-358								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	331-358								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	174-193	233-249	545-561						
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	174-193	233-249	535-551						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	174-193	233-249	535-551						

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	174-193	233-249	535-551						
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	483-508								
PVP4_RDV	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS	386-407	493-514	626-645						
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	483-508								
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	483-508								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	483-508								
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	226-250	483-508							
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	181-207	234-249	482-507						
PVP4_ROTH3	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	181-207	234-249	482-507						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	483-508								
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	181-207	234-249	482-507						
PVP4_ROTHU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	483-508	524-548							
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	76-91	181-207	234-249	482-507					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	181-207	234-249	482-507						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MJT)	181-207	234-249	482-507						
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	181-208	235-250	483-508						
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	181-207	234-249	482-507						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	181-207	234-249	482-507						
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	181-207	482-507							
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	181-207	482-507							
PVP4_ROTPS	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	235-250	483-508							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	487-512								
PVP4_ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	234-249	482-507							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	235-250	483-508							
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	483-508								
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	483-508								
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	395-411	483-508							
PVP4_SBMV	P4 PROTEIN	SOUTHERN BEAN MOSAIC VIRUS	90-114								
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	192-213	416-438	498-519	564-591					
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	295-317	326-345	494-517						
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	295-317	326-345	494-517						
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	295-317	494-517							
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	87-102	295-317							
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-317								
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-317								
PVP5_RDV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS	265-284	622-639	690-715						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	9-27	232-249	261-276						
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	321-337	438-462							
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	5-23	257-272							
PVP62_MRDV	PROB NONSTRUCTURAL 36 3 KD PROTEIN	MAIZE ROUGH DWARF VIRUS	130-146								
PVP64_NPVOP	MAJOR ENV GLYCOPROTEIN PREC	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	81-99	235-252	286-313						
PVP67_NPVAC	MAJOR ENV GLYCOPROTEIN PREC	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	84-102	238-255							
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS	155-172								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	9-27	232-249	261-276						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	204-221	233-248							
PVP6_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS	374-397								
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ)	374-397								
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	254-275								
PVP75_HSVSA	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	127-147								
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	274-301	405-420	678-704						
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	197-222								
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	205-222	301-323							
PVP7_RDV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS	400-416								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	262-285								

PCGENE	P13CTL2IF	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	98-123	638-660							
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	571-593								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-120								
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-120								
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-120								
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-120								
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-120								
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-120								
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-120								
PVP8_RDV	OUTER CAPSID PROTEIN P8 (	RICE DWARF VIRUS	374-400								
PVP8_RGDV	OUTER CAPSID PROTEIN P8	RICE GALL DWARF VIRUS	177-202	216-242	398-425						
PVP8_VACCC	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-242								
PVP8_VACCV	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	225-242								
PVP8_VARV	STRUCTURAL PROTEIN VP8 PRECURSOR	VARIOLA VIRUS	225-242								
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	111-129	214-241	251-271	379-405					
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	51-72								
PVP9_RGDV	NONSTRUCTURAL PROTEIN S9	RICE GALL DWARF VIRUS	151-175								
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	145-166	225-245							
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	122-144								
PVPRT_ADE12	ENDOPROTEASE	HUMAN ADENOVIRUS TYPE 12	161-181								
PVPRT_MMTVB	PROTEASE	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	42-63								
PVPRT_MPMV	PROTEASE	SIMIAN MASON-PFIZER VIRUS	80-99								
PVPRT_SMRVH	PROTEASE	SQUIRREL MONKEY RETROVIRUS	256-271								
PVPRT_SRV1	PROTEASE	SIMIAN RETROVIRUS SRV-1	80-99								
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (B1110 ISOLATE HXB3)	3-27								
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (B118 ISOLATE)	4-27								
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	3-28								
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	3-27								
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	3-26								
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	4-27								
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	3-28								
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-27								
PVPU_HV1MN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	3-20								
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	3-28								
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	3-27								
PVPU_HV1S1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	3-28								
PVPU_HV1SC	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	3-28								
PVPU_HV1Z3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z3/CDC-Z34 ISOLATE)	3-28								
PVPU_JSRV	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET	24-45								
PVPX_HV2BE	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	10-32								
PVPX_HV2CA	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	10-32								
PVPX_HV2D1	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	10-32								
PVPX_HV2D2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9-31								
PVPX_HV2GI	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	10-32								
PVPX_HV2NZ	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	10-32								
PVPX_HV2RO	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	10-32								
PVPX_HV2SB	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	10-32								
PVPX_HV2ST	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	10-32								
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	145-165								
PVPX_SIVAJ	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1) (S	66-84								
PVPX_SIVMI	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (NDI142-83 ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVMK	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVML	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVS4	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SM14 ISOLATE) (SOOTY M	10-32								
PVPX_SIVSP	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE) (SOOTY MA	10-32								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-312	904-929							
PVS05_ROTBR	NONSTRUCTURAL PROTEIN NCVP2	BOVINE ROTAVIRUS (STRAIN RF)	140-157	461-487							

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS05_ROTH1	NONSTRUCTURAL PROTEIN NCVP2	HUMAN ROTAVIRUS (STRAIN IGV-80-1)	140-157	428-450	457-473						
PVS05_ROTPC	NONSTRUCTURAL PROTEIN NS53	PORCINE ROTAVIRUS (GROUP C / STRAIN CIWI[illegible]N)	88-112								
PVS05_ROTS1	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	399-414								
PVS06_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	202-225								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-85								
PVS06_ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	202-225								
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	202-225								
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	202-225								
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	22-40								
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	22-40								
PVS06_ROTH1	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	202-225								
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-85								
PVS06_ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	202-225								
PVS06_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	202-225								
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-85	314-340							
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	202-225								
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	131-155								
PVS08_ROTPC	GLYCOPROTEIN VP7 PRECURSOR	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	117-136								
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-295								
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	131-155								
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	131-155								
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	131-155								
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK3)	131-155								
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	131-155								
PVS09_ROTC7	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	134-158								
PVS09_ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	131-155								
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	205-232								
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	131-155	197-212							
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	197-212								
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	197-212								
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	197-212								
PVS09_ROTHL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	131-155	197-212							
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	131-155	197-212							
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	131-155	197-212							
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	131-155								
PVS09_ROTHR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	131-155								
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	197-212								
PVS09_ROTHV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	197-212								
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	131-155	197-212							
PVS09_ROTP5	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	131-155	197-212							
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	131-155								
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	197-212								
PVS09_ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BMI-1)	197-212								
PVS09_ROTRH	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	131-155								
PVS09_ROTS1	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	131-155								
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	136-153								
PVSH_HRSVA	SMALL HYDROPHOBIC PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	16-41								
PVSH_MUMP1	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL)	7-29								
PVSH_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2 & 6)	7-29								
PVSH_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	7-29								
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	10-29								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	7-29								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	7-29								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	7-29								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	7-29								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	6-29								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	10-29								

PCGENE	P1:CTL2:P	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	7-29								
PVSH_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAHASHI)	10-29								
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	10-29								
PVSI1_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-136								
PVSI3_REOVD	SIGMA 3 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	152-170								
PVSI3_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	152-170								
PVSI3_REOVL	SIGMA 3 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	152-170								
PVSIS_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	79-101								
PVST2_HEVBU	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA)	292-311								
PVST2_HEVME	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO)	292-311								
PVST2_HEVMY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR)	292-311								
PVST2_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN)	292-311								
PVST2_HEVRH	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RHESUS)	160-179								
PVT2_MYXVL	TUMOR NECROSIS FACTOR SOL RECEPTOR PREC	MYXOMA VIRUS (STRAIN LAUSANNE)	261-283								
PVT2_SFVKA	TUMOR NECROSIS FACTOR SOL RECEPTOR PREC	SHOPE FIBROMA VIRUS (STRAIN KASZA)	270-289								
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	116-138								
PVT4_SFVKA	T4 PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	125-148								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	117-139	166-192	227-250						
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	409-430								
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	363-380	673-688							
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	260-278								
PVTER_HSVEB	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-381								
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	309-333	756-781							
PVTER_HSVSA	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	218-241								
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	372-389								
PX_HPBGS	PROTEIN X	GROUND SQUIRREL HEPATITIS VIRUS	68-85								
PX_WHV1	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 1	68-85								
PX_WHV59	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 59	68-85								
PX_WHV7	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 7	68-85								
PX_WHV8	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8	68-85								
PX_WHV8I	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	68-85								
PX_WHVW6	PROTEIN X	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS23)	68-85								
PY104_ADE07	HYPOTHETICAL 10 4 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	55-73								
PY108_SSV1	HYPOTHETICAL 10 8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	66-90								
PY10K_MSVS	HYPOTHETICAL 10 9 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	24-47								
PY11B_SSV1	HYPOTHETICAL 11 8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	42-59								
PY11K_PASV	HYPOTHETICAL 11 9 KD PROTEIN	PANICUM STREAK VIRUS	29-52								
PY12K_BNYVO	RNA-3 HYPOTHETICAL 11 6 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE G1)	15-42								
PY12K_CMVSI	HYPOTHETICAL 12 4 KD PROTEIN	CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	8-30								
PY137_ADE02	HYPOTHETICAL PROTEIN B-137	HUMAN ADENOVIRUS TYPE 2	28-50								
PY13K_CLVK	HYPOTHETICAL 13 1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-55								
PY13K_CLVN	HYPOTHETICAL 13 1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-55								
PY13K_TYLCM	HYPOTHETICAL 13 3 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	10-27								
PY13K_TYLCV	HYPOTHETICAL 13 4 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	34-55								
PY145_ADE07	HYPOTHETICAL 14 5 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	108-132								
PY14K_CSMV	HYPOTHETICAL 14 5 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	54-80								
PY18K_SSV1	HYPOTHETICAL 18 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162							
PY206_ADE07	HYPOTHETICAL 20 6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73								
PY23K_BNYVF	RNA-3 HYPOTHETICAL 24 7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188								
PY29K_NPVAC	HYPOTHETICAL 29 9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90								
PY32K_SSV1	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142								
PY6K0_SSV1	HYPOTHETICAL 6 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44								
PY7K4_VACCV	HYPOTHETICAL 7 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36								
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120								
PY85K_SSV1	HYPOTHETICAL 85 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	155-173	543-565	657-675	764-784				

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PY97_ADE07	HYPOTHETICAL 9 7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77								
PY9K3_SSV1	HYPOTHETICAL 9 2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77							
PYAL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYBL3_SFV3L	BEL-3 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78								
PYDH1_HSVSC	HYP 28 7 KD PROTEIN IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	208-230								
PYDH3_HSVSC	HYP 9 5 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYGA1_HSVMB	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190								
PYGA1_HSVMM	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HHLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYHR3_VACCV	HYP HOST RANGE 27 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102								
PYIO2_CVMA5	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYIOR_CVMI	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYIOR_CVMS	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	7-33								
PYKR2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYL12_ADE41	HYPOTHETICAL 8 0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73								
PYMR2_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350					
PYMSP_IRV22	HYPOTHETICAL 15 9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46								
PYOR1_ADEG1	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTV1	HYPOTHETICAL 7 9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR2_EAV	HYPOTHETICAL 25 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR3_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR3_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR3_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR3_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR5_ADEG1	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR5_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYORJ_TTV1	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYORL_TTV1	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYORM_TTV1	HYPOTHETICAL 38 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYORP_TTV1	HYPOTHETICAL 20 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 43 3 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP62_NPVOP	HYPOTHETICAL 12 2 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYPO4_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRP1_IRV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRP4_IRV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRP5_IRV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						

PCGENE	P11CTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYRR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYRR2_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB2_NPVOP	HYPOTHETICAL 24 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVAE_VACCC	HYPOTHETICAL 18 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAF_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10 5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBQ_VACCC	HYPOTHETICAL 11 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVD2_VACCV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDA_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVFF_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVGA_VACCC	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVKB_VACCC	HYPOTHETICAL 9 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL3_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								
PY14K_CSMV	HYPOTHETICAL 14 5 KD PROTEIN	CHLORUS STRIATE MOSAIC VIRUS	54-80								
PY18K_SSV1	HYPOTHETICAL 18 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162							
PY20S_ADE07	HYPOTHETICAL 20 6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73								
PY25K_BNYVF	RNA-3 HYPOTHETICAL 24 7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188								
PY29K_NPVAC	HYPOTHETICAL 29 9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90								
PY32K_SSV1	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142								
PY6K0_SSV1	HYPOTHETICAL 6 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44								
PY7K4_VACCV	HYPOTHETICAL 7 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36								
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120								
PY85K_SSV1	HYPOTHETICAL 85 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	155-173	543-565	657-675	764-784				
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PY97_ADE07	HYPOTHETICAL 9 7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77								
PY9K2_SSV1	HYPOTHETICAL 9 2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77							
PYAL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYBL2_SFV3L	BEL-2 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78								
PYDH1_HSVSC	HYPOTHETICAL 28 7 KD PROTEIN IN DHFR 3'REGIO	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230								
PYDH3_HSVSC	HYPOTHETICAL 9 5 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYGA1_HSVMB	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190								
PYGA1_HSVMM	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HHLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYHRJ_VACCV	HYPOTHETICAL HOST RANGE 27 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102								
PYI02_CVMA5	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI0R_CVMI	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS M0IV	141-156								
PYI0R_CVMS	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS M0IV	7-33								
PYKR2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYL12_ADE41	HYPOTHETICAL 8 0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73								
PYM02_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350					
PYMSP_IRV22	HYPOTHETICAL 15 9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46								

PCGENE	P12CTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYOR1_ADEGI	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTVI	HYPOTHETICAL 7 9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR2_EAV	HYPOTHETICAL 25 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR2_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR3_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR3_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR3_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR5_ADEGI	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR5_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYOR1_TTVI	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYORL_TTVI	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYORM_TTVI	HYPOTHETICAL 28 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYORP_TTVI	HYPOTHETICAL 20 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 43 5 KD PROTEIN IN P47 3'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP62_NPVOP	HYPOTHETICAL 12 2 KD PROTEIN IN P6 5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN IN P6 5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYP04_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN IN POL 3'REGION	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRP1_IRV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRP4_IRV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRP5_IRV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						
PYRR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYRR2_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB2_NPVOP	HYPOTHETICAL 24 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVA2_VACCC	HYPOTHETICAL 18 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAF_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 9 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10 5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBO_VACCC	HYPOTHETICAL 11 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVD2_VACCV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDA_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVFF_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVGA_VACCC	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVKB_VACCC	HYPOTHETICAL 9 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								

TABLE XIV

SEARCH RESULTS SUMMARY

FOR P23TLZIPC MOTIF

PCGENE	PIR2	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S) (TBRV)	617-651	1041-1077					
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY) (TOMRSV)	316-347						
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27) (BEV)	1811-1866	2001-2037					
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	102-135	1650-1678	3220-3248				
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	102-135	1560-1588	3130-3158				
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	226-255						
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	1120-1157						
PPOLG_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A23 (ECHO 9 VIRUS) (ECO-9-V)	67-99						
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1601-1633						
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1582-1614						
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1585-1617						
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	1583-1615						
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	835-868	1585-1617					
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1111-1145	1485-1519	2401-2434				
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	1112-1146						
PPOLG_DEN16	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	61-95	1112-1146					
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	61-95	1112-1146					
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	61-95						
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	61-95	1112-1146					
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	364-398						
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	61-95	1112-1146					
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974	812-846						
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	61-95	2399-2432					
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	60-94						
PPOLG_ECHG	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	774-806						
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1194-1226	1463-1501					
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D NONDIABETOGENIC)	1196-1228	1465-1503					
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	1196-1228	1465-1503					
PPOLG_FMDVI	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61) (APHTHOVIRUS A)	1036-1064	1098-1133	1167-1199	1465-1501			
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12) (APHTHOVIRUS A)	1036-1074	1098-1133	1167-1199	1465-1501			
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	1098-1133	1167-1199	1465-1501				
PPOLG_HCVI	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1) (HCV)	1640-1670						
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT) (SWINE FEVER VIRUS)	1363-1393	1560-1588	3131-3159				
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA) (SWINE FEVER VIRUS)	102-135	1560-1588	3131-3159				
PPOLG_HCVHK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HK) (HCV)	1640-1670						
PPOLG_HCVII	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE II) (HCV)	1640-1670						
PPOLG_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476) (HCV)	254-291						
PPOLG_HCVI6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6) (HCV)	711-742						
PPOLG_HCVI8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8) (HCV)	711-742	1893-1924					
PPOLG_HCVIA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE) (HCV)	1640-1670						
PPOLG_HCVIT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1) (HCV)	1640-1670						
PPOLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN) (HCV	1640-1670						
PPOLG_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	1514-1550	2068-2099					
PPOLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	1514-1550	2068-2099					
PPOLG_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	1514-1550	2068-2099					
PPOLG_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	1515-1551	2069-2100					
PPOLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	1515-1551	2069-2100					
PPOLG_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	1515-1551	2069-2100					
PPOLG_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	831-868	1517-1553					
PPOLG_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1094-1132	2005-2041					
PPOLG_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	1453-1485	1816-1849	1983-2019				
PPOLG_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	1446-1475	1809-1842	1976-2012				
PPOLG_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1460-1492	1823-1856	1990-2026				
PPOLG_HRV7	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71	1108-1145						
PPOLG_IBDVG	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN GII)	222-260						
PPOLG_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	61-95	1233-1269	1516-1549	2779-2813	3274-3311		
PPOLG_JAEV5	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	61-95	1233-1269	1516-1549	2779-2813	3274-3311		

PCGENE	PJSCTL2IP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PPOLG_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JaOArS982)	61-95	1233-1269	1516-1549	2779-2813	3274-3311		
PPOLG_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	1161-1197						
PPOLG_KUNM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	61-95	561-594	3275-3312				
PPOLG_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	1157-1188	1519-1551	2230-2264	2366-2398	3095-3132		
PPOLG_MCFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	1174-1206	1330-1359					
PPOLG_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS (MDMV)	322-351						
PPOLG_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	61-95	1305-1342					
PPOLG_ORMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	344-376						
PPOLG_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE) (PEMV)	826-859	1086-1124					
PPOLG_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1121-1158						
PPOLG_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1122-1159						
PPOLG_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1120-1157						
PPOLG_POL2W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1120-1157						
PPOLG_POL32	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23127)	1119-1156						
PPOLG_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P3/LEON/37 AND P3/LEON 12A[1][D])	1119-1156						
PPOLG_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D) (PPV)	2960-2991	3084-3113					
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR) (PPV)	1337-1368	1461-1490					
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT) (PPV)	2944-2975	3068-3097					
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC) (PPV)	2959-2990	3083-3112					
PPOLG_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPDI)	931-966	1411-1445	3149-3178				
PPOLG_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN) (PVY)	1302-1336	3004-3033					
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N) (PVY)	1302-1336						
PPOLG_PYFVI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121) (PYFV)	210-262	1110-1139	1901-1931				
PPOLG_SOMVN	GENOME POLYPROTEIN	SOYBEAN MOSAIC VIRUS (STRAIN N)	245-274						
PPOLG_STEVM	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	61-95	1301-1331					
PPOLG_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	307-336						
PPOLG_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN IV) '76)	1585-1617						
PPOLG_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG/27/72)	1585-1617						
PPOLG_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN) (TBEV)	835-869	1157-1188	2366-2398	3093-3130			
PPOLG_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE) (TBEV)	1157-1188	2366-2398	3095-3132				
PPOLG_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV)	823-869	2998-3057					
PPOLG_THEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN)	1074-1102	1191-1221	1470-1508	1908-1939			
PPOLG_THEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1072-1100	1191-1219	1468-1506	1906-1937			
PPOLG_THEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1074-1102	1191-1221	1470-1508	1908-1939			
PPOLG_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS (TUMV)	1573-1602						
PPOLG_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS (TVMV)	2698-2731						
PPOLG_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	958-987						
PPOLG_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	61-95	557-590	3272-3309				
PPOLG_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	1157-1186	1228-1266	1495-1531	2308-2340	3092-3127		
PPOLG_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	1157-1186	1228-1266	1495-1531	2308-2340	3092-3127		
PPOLG_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS (ZYMV)	329-358						
PPOLH_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1122-1159						
PPOLH_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	244-273						
PPOLN_EEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	613-648	1436-1468					
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI68 BIV) (FCV)	327-365						
PPOLN_FCVF4	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4) (FCV)	300-333						
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	801-841						
PPOLN_HEVHI	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA) (HEV)	1618-1652						
PPOLN_HEVMX	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	1618-1650						
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	1618-1652						
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	1617-1651						
PPOLN_MIDDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	25-57						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	1144-1180	1404-1439					
PPOLN_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV	299-337	1562-1594					
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1146-1175	1406-1441					
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1454-1486						
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1454-1486						

PCGENE	PFUNCTION	All Viruses (no Retroviruses)	AREA1	AREA2	AREA3	AREA4	AREA5
PPRO_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	524-536				
PPRO_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA3)(EEE PROTEIN)	533-547				
PPRO_EEEV	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1203-1239				
PPRO_EEVV	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1203-1239				
PPRO_ONNG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	1130-1182	1201-1233			
PPRO_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092) (RRV)	1216-1350				
PPRO_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48) (RRV)	1216-1350				
PPRO_SIV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1215-1251				
PPRO_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STUDY TYPE OCKELBO/S STRAIN EGYPT 87-5)	1197-1233				
PPRO_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN SIBSP AND IRLP)	1197-1233				
PPRO_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	1188-1224				
PPOL_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106) (BIV)	142-733				
PPOL_BIV27	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	142-733				
PPOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE) (BLV)	140-374				
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK) (CAEV)	206-240	322-355			
PPOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	1234-1267	1484-1518	1730-1788	1800-1831	
PPOL_EIAVP	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1769) (EIAV)	166-198	506-539			
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL32) (EIAV)	166-198	506-539			
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	166-198	505-538			
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	126-154				
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	348-378				
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK) (HTLV-I)	637-688				
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE) (HTLV-I)	637-688				
PPOL_HIVAJ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	331-364	500-537			
PPOL_HIVBI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HIV-1)	341-376	512-549			
PPOL_HIVBS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV-1)	341-376	512-549			
PPOL_HIVBR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV-1)	341-376	512-549			
PPOL_HIVEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV-1)	330-363	499-536			
PPOL_HIVHJ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE) (HIV-1)	331-364	500-537			
PPOL_HIVJR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE) (HIV-1)	335-368	504-541			
PPOL_HIVMA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HIV-1)	330-363				
PPOL_HIVMN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE) (HIV-1)	334-367	503-540			
PPOL_HIVNS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE) (HIV-1)	331-364	500-537			
PPOL_HIVND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HIV-1)	330-363	499-536			
PPOL_HIVOY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE) (HIV-1)	331-364	500-537			
PPOL_HIVPV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HIV-1)	341-376	512-549			
PPOL_HIVRI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (HIV-1)	330-363	499-536			
PPOL_HIVU4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN IIIB/BRU/LAV-1)	330-363	499-536			
PPOL_HIVZ2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE) (HIV-1)	330-363	499-536			
PPOL_HIVZA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	353-386				
PPOL_HIVNZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ALI) (HIV-2)	341-386				
PPOL_HIVBO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	354-387				
PPOL_HIVIA	PUTATIVE POL POLYPROTEIN	HANSENULA INTRACISTERNAL A-PARTICLE TRANSPOSON	460-496				
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	186-220				
PPOL_KMSVP	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (KMSV)	650-681				
PPOL_OMVV5	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	61-98	102-139	182-216	298-331	
PPOL_RIBV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	788-824	891-919	1999-1411		
PPOL_RTBVP	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ENHANCER PHILIPPINES) (RTBV)	788-824	891-919	1999-1411		
PPOL_SIVFA	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3) (SFV-1)	337-365				
PPOL_SIVCP	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCP) (HIV)	335-388	524-561			
PPOL_SIVMV	INTEGRASE POLYPROTEIN	SOUTH AFRICAN CLAWED FROG RETROVIRUS	17-55	58-89			
PPOL_SRV1	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	650-681				
PPOL_VIL1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	80-117	201-235	317-350		
PPOL_VIL1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514) CLONE LV1-1K31)	80-117	317-350			
PPOL_VIL2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514) CLONE LV1-1K32)	80-117	201-235	317-350		
PPPA1_HSVSG	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	60-91				
PPTP_NPVAC	PROTEIN-TYROSINE PHOSPHATASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	53-85				

PCGENE	P2JCTL2IP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PREEP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS (CSV)	113-149						
PREV_BIV27	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	74-109						
PREV_EIAV9	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1169) (EIAV)	44-79						
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	44-79						
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	74-109						
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE) (SIV-AGM)	25-62						
PRIR1_ASFM2	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	610-666						
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	279-311	393-430	449-477				
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	60-92	503-531					
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN COPENHAGEN)	203-235						
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN WR)	203-235						
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARIOLA VIRUS	203-235						
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34-72	221-254	488-516				
PRMIL_AVEVR	RMIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN ROUS-ASSOCIATED VIRUS TYPE 1	149-177						
PRMIL_AVIII	RMIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN RETROVIRUS IC10	133-161						
PRP94_VACCV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIF	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	399-427						
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIF	VARIOLA VIRUS	399-427						
PRPO1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR)	1005-1033						
PRPO2_CAPVK	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	CAPRIPOXVIRUS (STRAIN KS-1)	297-333	667-696					
PRPO2_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	COWPOX VIRUS (CPV)	202-236	542-578					
PRPO2_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	202-236	542-578					
PRPO2_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	VARIOLA VIRUS	202-236	542-578					
PRPO7_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	38-66						
PRPO7_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VARIOLA VIRUS	38-66						
PRPOI_FOWPI	DNA-DIRECTED RNA POLYMERASE 18 KD POLYPEPTIDE	FOWLPOX VIRUS (STRAIN FP-1)	37-88						
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS (LV)	1233-1268	3133-3163	3426-3457				
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS (EAV)	171-207	3041-3072					
PRRP1_DHVII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	96-125	199-234					
PRRP1_IAV17	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	138-170						
PRRP1_INCII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/II/50)	564-598						
PRRP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	398-435	484-518					
PRRP2_IADH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	484-518						
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	484-518						
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	484-518						
PRRP2_IAILO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	484-518						
PRRP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	484-518						
PRRP2_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	484-518						
PRRP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	484-518						
PRRP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	484-518						
PRRP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	484-518						
PRRP2_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68	484-518						
PRRP2_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	484-518						
PRRP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34	484-518						
PRRP2_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	484-518						
PRRP2_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	484-518						
PRRP2_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	484-518						
PRRP2_IAV17	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	484-518						
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	484-518						
PRRP2_IAZW1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	484-518						
PRRP2_IAZW3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1126/83)	484-518						
PRRP2_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	484-518						
PRRP2_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	484-518						
PRRP3_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	515-553	585-613					
PRRP3_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	585-613						
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	579-613						
PRRP3_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	585-613						
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	585-613						

PCGENE	P33CTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PRRPJ_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	585-613						
PRRPJ_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	585-613						
PRRPJ_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	585-613						
PRRPJ_IASE7	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/82)	585-613						
PRRPJ_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	585-613						
PRRPJ_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	585-613						
PRRPJ_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	585-613						
PRRPJ_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	735-769						
PRRPJ_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	735-769						
PRRPJ_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	609-641						
PRRPJ_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/JJ/50)	609-641						
PRRPJ_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	THOGOTO VIRUS (THO)	109-145	324-356					
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	410-443	712-745	1262-1295	1963-1999	2078-2112	2474-2508	3153-3191
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	708-740	3544-3577	3757-3785	3933-3961			
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS (BEV)	941-969	2137-2169	2178-2206				
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	346-380	684-714	1689-1722	2698-2730			
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	346-380	684-714	1687-1720	2356-2391	2696-2728		
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	173-207	322-350	482-515				
PRRPB_CVPRE	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS	80-113						
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	636-670						
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	303-331	1096-1128					
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118) (KOREAN HEMORRHAGIC FEVER VIRUS)	1938-1971						
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	892-922	1181-1213					
PRRPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	144-176	698-736	1042-1074	1797-1832			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	144-176	698-736	1042-1074	2223-2253			
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	193-227	647-683	788-825	1160-1192	1886-1914		
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1882-1913						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45) (NDV)	626-661	1571-1603					
PRRPL_PI2HT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	268-305	558-595	654-688	1562-1599	1881-1912	2025-2053	
PRRPL_PI3H4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	41-76	735-764	784-814	2111-2139			
PRRPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	60-90	804-837	1365-1394	1930-1962			
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	60-90	804-837	1365-1394	1930-1962			
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS (RDV)	1293-1323						
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	1018-1055	2009-2044					
PRRPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	194-231	233-269	735-764	784-814	2140-2177		
PRRPL_SENDH	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	14-51	53-89	555-584	1927-1955	1960-1997		
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	194-231	233-269	735-764	784-814	2140-2177		
PRRPL_SEOUR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	394-431	1938-1971	2081-2119				
PRRPL_SV5WR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR) (SV5)	557-594	1094-1122	2020-2051				
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS (SYNV)	126-164	605-634	820-856	918-951	1484-1517		
PRRPL_TSWVD	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR-01) (TSWV)	43-79	843-880	2266-2298	2369-2403	2481-2511	2805-2840	
PRRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS (UUK)	1017-1051	1147-1177	1293-1321	2060-2095			
PRRPL_VSVIH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	209-246	312-349	1011-1039	1662-1697	1956-1989		
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	1011-1039	1956-1989					
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	138-171	209-246	312-349	961-999	1011-1039	1739-1772	2051-2087
PRRPO_BWYVF	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	146-174						
PRRPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	722-755						
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV) (BYDV)	722-755						
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV) (BYDV)	722-755						
PRRPO_CARMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS (CARMV)	4-37						
PRRPO_CGMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	443-481	725-755	1095-1132	1565-1597			
PRRPO_CNV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CUCUMBER NECROSIS VIRUS (CNV)	470-501						
PRRPO_CRN	PROBABLE RNA-DIRECTED RNA POLYMERASE	CYMBIDIUM RINGSPOT VIRUS	28-62	267-300	470-501				
PRRPO_IBDVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70) (IBDV)	186-218	274-302					
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS	260-288	511-543	599-627				
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	360-390	749-778					
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP) (IPNV)	360-390	749-778					

PCGENE	PIR1:RDRPZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7
PRRPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	109-137	263-291	2077-2106				
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	109-137						
PRRPO_MCMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS (MCMV)	16-48	51-81					
PRRPO_PLRVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN I) (PLRV	576-607						
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	576-607						
PRRPO_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN) (PPMV)	375-407	702-730	859-891	1069-1106	1533-1565		
PRRPO_RCNMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS (RCNMV)	278-314	320-353					
PRRPO_REOVJ	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	284-315						
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	25-60	200-231	247-276				
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	200-231	247-276					
PRRPO_ROTPG	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	200-231	247-276					
PRRPO_ROTSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	25-60	200-231	247-276				
PRRPO_TACV	RNA POLYMERASE	TACARIBE VIRUS	17-52	109-138	2078-2112				
PRRPO_TBSVC	PROBABLE RNA-DIRECTED RNA POLYMERASE	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY) (TBSV)	470-501						
PRRPO_TCV	PROBABLE RNA-DIRECTED RNA POLYMERASE	TURNIP CRINKLE VIRUS (TCV)	280-318						
PRRPO_TMGMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	67-97	128-159	209-244	376-406	450-483	855-887	1527-1559
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE) (TMV)	128-159	376-406	700-728	1533-1565			
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN) (TMV)	128-159	376-406	700-728	1533-1565			
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L) (TMV)	128-159	376-406	700-728	857-889	1533-1565		
PRRPO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	231-263						
PRRPO_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	5-40	234-270					
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	295-332						
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	295-332						
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	295-332						
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	295-332						
PRRPP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	211-248						
PRRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	212-249						
PRRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-249						
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32) (NDV)	220-255						
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45) (NDV)	220-255						
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2	216-253						
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	216-253						
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	220-257	332-364					
PRRPP_PI4HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	220-257	332-364					
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-168						
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	216-244						
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	216-244						
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND RABIES VIRUS (STRAIN PM)	216-244						
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	89-122	216-244					
PRRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	216-244						
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	530-566						
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/4)	530-566						
PRRPP_SENH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HOSHINO)	530-566						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	530-566						
PRRPP_SEND2	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	530-566						
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	199-236						
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN MISSOURI	198-230						
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	197-230						
PSODC_VACCC	SUPEROXIDE DISMUTASE-LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-55						
PSODC_VACCV	SUPEROXIDE DISMUTASE-LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-55						
PSODC_VARV	SUPEROXIDE DISMUTASE-LIKE PROTEIN	VARIOLA VIRUS	19-55						
PSPIR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	58-86	138-172	627-659	671-701			
PSPII_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	167-200						
PSPII_VACCC	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN COPENHAGEN)	112-140						
PSPII_VACCV	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN WR)	112-140						
PSPII_VARV	SERINE PROTEINASE INHIBITOR 1	VARIOLA VIRUS	116-144						
PTAGA_LDWPV	TRANS-ACTIVATOR PROTEIN TM	LDWI POX VIRUS	199-230						

PCGENE	P15CTL2IP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS (BFDV)	99-129	172-210	461-491				
PTAMI_POVHA	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	106-138						
PTAMI_POVMJ	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN J)	43-80						
PTAMI_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43-80						
PTAMI_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	43-80						
PTASM_POVBA	SMALL T ANTIGEN	POLYOMAVIRUS BK (STRAIN AS)	130-162						
PTASM_POVBK	SMALL T ANTIGEN	POLYOMAVIRUS BK	130-162						
PTASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMAVIRUS	106-138						
PTASM_POVMA	SMALL T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43-80						
PTASM_SV40	SMALL T ANTIGEN	SIMIAN VIRUS 40 (SV40)	122-164						
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	143-173	1469-1503	1791-1819	3102-3137			
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	161-192	699-736	812-840	2199-2228			
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	222-259	566-601	615-643	1436-1469	2037-2072		
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P) (EHV-1)	265-297	559-589	1072-1106	3363-3392			
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	467-505	714-751	823-861	926-960	1503-1536	2421-2457	
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	369-400						
PTMAF_AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	210-267						
PTOP2_ASFB7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	119-153	1105-1142					
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI/LIL 20/1) (ASFV)	119-153	1104-1141					
PTREL_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	189-226						
PTYSY_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	121-156						
PUL1_HSV6U	PROTEIN 1L	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	171-203						
PUDPT_NPVAC	ECDYSTEROID UDP-GLUCOSYLTRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	185-219	187-425	452-484				
PUL.02_HCMVA	HYPOTHETICAL PROTEIN UL2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-59						
PUL.06_EBV	VIRION PROTEIN BORF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	355-386						
PUL.06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-436						
PUL.06_HSVER	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P) (EHV-1)	222-251	437-475					
PUL.06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	299-330						
PUL.06_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	223-252	502-530					
PUL.07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186-216						
PUL.07_HSVER	GENE 55 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P) (EHV-1)	Nov-39						
PUL.08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-96						
PUL.08_HSV11	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	614-648						
PUL.08_VZVD	GENE 52 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	227-255						
PUL.09_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	678-713						
PUL.09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	168-204						
PUL.10_PRVNI	UL10 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	40-76						
PUL.16_HSV11	PROTEIN UL16	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	22-52						
PUL.17_HSV6U	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	302-339						
PUL.21_HSVER	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P) (EHV-1)	294-328						
PUL.21_PRVNI	PROTEIN UL21 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	242-271						
PUL.21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	46-92	375-412					
PUL.24_HCMVA	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	93-87						
PUL.24_ILTVT	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	158-196						
PUL.25_HSVEB	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P) (EHV-1)	343-379						
PUL.25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	290-323						
PUL.25_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	540-571						
PUL.28_HCMVA	HYPOTHETICAL PROTEIN UL28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	287-316						
PUL.31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	464-501						
PUL.31_HSVSA	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	161-197						
PUL.32_EBV	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN BFLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	367-405						
PUL.32_HSV11	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN UL32	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-438	564-592					
PUL.32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	81-115						
PUL.32_HSVSA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 68	HERPESVIRUS SAIMIRI (STRAIN 11)	276-307						
PUL.32_VZVD	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 36	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	553-581						
PUL.34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	98-130						
PUL.35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	138-169						

PLUGENE	PLUCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PUL36_HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	188-223						
PUL37_EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	85-123						
PUL37_HSVEB	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	702-732	778-812					
PUL37_HSVSA	GENE 23 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	566-602						
PUL37_VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	598-629	706-736	776-806				
PUL38_HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	157-188						
PUL41_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	274-307						
PUL43_HSV11	MEMBRANE PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-70						
PUL45_HSV11	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34-64	277-308					
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	438-471	741-777					
PUL47_HSVE4	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	580-615						
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	587-622						
PUL49_HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	226-259						
PUL49_HSVIP	TEGUMENT PROTEIN UL49 HOMOLOG	BOVINE HERPESVIRUS TYPE 1 (STRAIN PR-2)	135-168						
PUL53_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	582-617						
PUL52_HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	599-629	771-805					
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	316-344	580-618	912-947				
PUL52_HSVSA	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	229-267	374-411					
PUL51_HCMVA	PROTEIN UL51	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-248						
PUL51_HSV6U	UL51 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	105-139						
PUL60_HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	120-148						
PUL70_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	36-65	626-664					
PUL77_HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	381-413	565-598					
PUL78_HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	262-290	303-341					
PUL79_HSVSA	HYPOTHETICAL GENE 18 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	158-193						
PUL87_HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	130-159						
PUL87_HSVSA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	322-355						
PUL88_HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	309-337						
PUL88_HSV6U	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	150-187	238-272					
PUL91_HSVSA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	23-53						
PUL92_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	106-144						
PUL92_HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	123-157						
PUL93_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	387-420						
PUL95_EBV	HYPOTHETICAL PROTEIN BDLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	111-145						
PUL118_HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	102-130	152-181					
PUL121_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	129-164						
PUL128_HCMVA	HYPOTHETICAL PROTEIN UL128	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	64-96						
PUL129_HCMVA	HYPOTHETICAL PROTEIN UL129	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	66-99						
PUL130_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-114						
PUNG_EBV	URACIL-DNA GLYCOSYLASE	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	159-189						
PUNG_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-117						
PUNG_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	82-117						
PUNG_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	82-117						
PUS02_HCMVA	HYPOTHETICAL PROTEIN HQLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-73						
PUS07_HCMVA	HYPOTHETICAL PROTEIN HXLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153-190						
PUS09_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-213						
PUS10_HCMVA	HYPOTHETICAL PROTEIN HXLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-170						
PUS12_HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-67	113-142					
PUS13_HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-45						
PUS15_HCMVA	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	343-375						
PUS16_HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151-188	243-274					
PUS18_HCMVA	MEMBRANE PROTEIN HWLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	185-222						
PUS22_HCMVA	EARLY NUCLEAR PROTEIN HWLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-299						
PUS26_HCMVA	HYPOTHETICAL PROTEIN HRLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	132-164						
PUS27_HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	247-285						
PUS29_HCMVA	HYPOTHETICAL PROTEIN HRLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	246-276						
PUS30_HCMVA	HYPOTHETICAL PROTEIN HRLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208-246						

PCGENE	PIRCTL2IP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PV12S_AMVLE	12S KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	263-392						
PV11K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLD)	24-62						
PV14O_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	312-342						
PV17K_BSMV	17 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-75						
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CMV)	674-709						
PV27O_ASFB7	L270 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	103-135						
PV2A_BBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	636 673						
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	325-363	639-673	762-799				
PV2A_CMVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CMV)	208-243	292-320					
PV2A_CMVQ	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q) (CMV)	205-240						
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS (TAV)	297-325						
PV30K_TRVTC	29 1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	102-133						
PV3A_BBMV	3A PROTEIN	BROAD BEAN MOTTLE VIRUS	155-187						
PV3A_BMV	3A PROTEIN	BROME MOSAIC VIRUS (BMV)	159-189						
PV3A_CCMV	3A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	160-188						
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	5-43						
PV3A_IBVM	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41) (IBV)	5-42						
PV3A_IBVP3	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	5-42						
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/183/66) (IBV)	5-42						
PV51K_ACLSV	50 8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS (ACLSV)	70-106						
PV51K_BWYVF	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	366-398						
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE G01) (BWYV)	366-398						
PV56K_PLRVI	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I) (PLRV)	360-392						
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	360-392						
PV58K_BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	320-353						
PV70K_PLRVI	69 7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I) (PLRV)	220-257						
PV70K_PLRVW	69 7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	220-257						
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	103-131						
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-251						
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	217-251						
PVA04_VARV	PROTEIN A4	VARIOLA VIRUS	207-241						
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-132						
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	96-133						
PVA18_VACCC	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	390 421						
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	390-421						
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	390-421						
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-111	170-203					
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	81-111	170-203					
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-76						
PVA31_VACCV	PROTEIN A31	VACCINIA VIRUS (STRAIN WR)	42-76						
PVA31_VARV	PROTEIN A31	VARIOLA VIRUS	42-76						
PVA32_VACCV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR) AND VACCINIA VIRUS (STRAIN COPENHAG	48-79						
PVA32_VARV	PROTEIN A32	VARIOLA VIRUS	48-49						
PVA40_VACCC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-37						
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	94-129						
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	94-129						
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	95-130						
PVAS1_VACCC	PROTEIN AS1	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-143						
PVAS1_VACCV	PROTEIN AS1	VACCINIA VIRUS (STRAIN WR)	109-143						
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS (BCTV)	89-118						
PVAL1_BGMV	AL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	89-118						
PVAL1_CLVK	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844	88-117						
PVAL1_CLVN	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	88-117						
PVAL1_PYMVV	AL1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	89-118						
PVAL1_TGMV	AL1 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS (TGMV)	90-119						
PVAL1_TYLCM	AL1 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARRIANDI) (TYLCV)	89-118						
PVAL1_TYLCV	AL1 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV)	87-116						

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PCGENE	FUCTLZIP	All Viruses (no bacteriophages)							
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVAL3_BCTV	AL3 PROTEIN	BEET CURLY TOP VIRUS (BCTV)	82-113						
PVAL3_CLVK	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-113						
PVAL3_CLVN	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-113						
PVAL3_TYLCM	AL3 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE) (TYLCV)	78-116						
PVAL3_TYLCV	AL3 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV	77-113						
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841) (CAMV)	20-53	81-116					
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4) (CAMV	20-53	102-130					
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DBC) (CAMV)	20-53	81-116					
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153) (CAMV)	20-53	81-116					
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147) (CAMV)	20-53	81-116					
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG) (CAMV)	20-53	81-116					
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	124-156	489-525					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	124-156	489-525					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-525						
PVB16_COWPX	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	COWPOX VIRUS (CPV)	89-126						
PVB16_VACCV	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	89-126						
PVB19_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	213-244						
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	211-242						
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	211-242						
PVB19_VARV	SURFACE ANTIGEN S PRECURSOR	VARIOLA VIRUS	211-242						
PVBR1_BGMV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-198						
PVC03_SFVKA	G-PROTEIN COUPLED RECEPTOR HOMOLOG C3	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	98-130						
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-139	182-216					
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	109-139	183-215					
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	109-139						
PVC06_VACCC	PROTEIN C6	VACCINIA VIRUS (STRAIN COPENHAGEN)	36-67						
PVC06_VACCV	PROTEIN C6	VACCINIA VIRUS (STRAIN WR)	36-67						
PVC06_VARV	PROTEIN C6	VARIOLA VIRUS	36-67						
PVC07_SFVKA	HYPOTHETICAL PROTEIN C7	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	60-97						
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	573-610						
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	573-610						
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	85-121						
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-158						
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	121-158						
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	121-158						
PVC21_VACCC	PROTEIN C21/B27	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-34						
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	148-183	200-230					
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-78	128-161	258-286				
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	19-49						
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	124-161	666-696	841-869				
PVCAP_HSVER	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	17-54	198-232	272-301				
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	144-179	196-226	734-769	1062-1096			
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S) (PRV)	189-221	260-289					
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	31-68						
PVCOR1_ADE02	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	86-115						
PVCOR1_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-114						
PVD03_VACCC	PROTEIN D3	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-50	146-182					
PVD03_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	12-50	146-182					
PVD03_VARV	PROTEIN D3	VARIOLA VIRUS	12-50	146-182					
PVD05_FOWP1	92 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	315-352						
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	320-348						
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	320-348						
PVD05_VARV	PROTEIN D5	VARIOLA VIRUS	320-348						
PVD10_FOWP1	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	114-143						
PVE05_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN DAIREN I)	31-60						
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	226-260	430-458	511-540				
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	226-260	430-458	511-540				

PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	430-458	511-540					
PVE10_VACCC	PROTEIN E10	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-41						
PVE10_VACCV	PROTEIN E10	VACCINIA VIRUS (STRAIN WR)	3-41						
PVE10_VARV	PROTEIN E10	VARIOLA VIRUS	102-131						
PVE12_HPV16	PROBABLE E1 PROTEIN 2	HUMAN PAPILLOMAVIRUS TYPE 16	45-77						
PVE18_NPVAC	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	4-35						
PVE1_HPV05	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	258-291						
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	255-288						
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	238-267	519-547					
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	230-263						
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	242-271						
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	105-138	193-231					
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	238-267						
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	6-35						
PVE1_HPV5B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	258-291						
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	163-201						
PVE1_PAPVD	E1 PROTEIN	DEER PAPILLOMAVIRUS	257-290						
PVE1_PCPV1	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	118-150						
PVE36_NPVAC	EARLY 35.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	151-182						
PVE2_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	117-147						
PVE2_RHPV1	E2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	14-52						
PVE41_NPVAC	EARLY 40.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	19-56						
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-56						
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	19-56						
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	19-56						
PVE5_HPV13	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	19-56						
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	87-118						
PVE5_PCPV1	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	21-58						
PVE5_RHPV1	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	109-140						
PVE6_HPV1A	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	91-128						
PVE7_HPV05	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	55-90						
PVE7_HPV08	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	55-90						
PVE7_HPV11	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	47-83						
PVE7_HPV16	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	47-83						
PVE7_HPV1A	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	48-77						
PVE7_HPV31	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	47-83						
PVE7_HPV33	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	47-83						
PVE7_HPV35	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	48-84						
PVE7_HPV41	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	63-94						
PVE7_HPV47	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	55-90						
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-94						
PVE7_HPV58	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	48-84						
PVE7_HPV5B	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	55-90						
PVE7_HPV6B	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	47-83						
PVE7_PAPVD	E7 PROTEIN	DEER PAPILLOMAVIRUS	48-86						
PVE7_PAPVE	E7 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS (EEPV)	60-93						
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	123-157	650-678					
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	154-182						
PVENV_DEV	ENVELOPE PROTEIN	DERNE VIRUS (DEV)	16-51	87-117					
PVENV_DHOI	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	297-335						
PVENV_MCV1	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCVI)	203-236						
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCVII)	203-236						
PVENV_VACCC	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	208-241						
PVENV_VACCI	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN IHD-J)	208-241						
PVENV_VACCP	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN L-IVP)	208-241						
PVENV_VACCV	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN WR)	208-241						
PVENV_VARV	MAJOR ENVELOPE PROTEIN	VARIOLA VIRUS	155-187	208-241					

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PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVT01_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	2-40	61-93					
PVT01_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	2-40	61-93					
PVFP1_FOWPV	PROTEIN FP1	FOWLPOX VIRUS	297-330						
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	237-267						
PVFP7_CAPVK	PROTEIN F7	CAPRIPOXVIRUS (STRAIN KS-1)	89-118						
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-61						
PVFUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	28-61						
PVFUS_VARV	14 KD FUSION PROTEIN	VARIOLA VIRUS	28-61						
PVG01_HSVII	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	317-346						
PVG02_HSVEB	HYPOTHETICAL GENE 2 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	163-196						
PVG02_VACCV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	92-120						
PVG02_VARV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTE	VARIOLA VIRUS	92-120						
PVG03_HSVII	HYPOTHETICAL GENE 3 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	108-136						
PVG06_HSVII	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	54-83						
PVG06_VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	99-136						
PVG06_VARV	PROTEIN G6	VARIOLA VIRUS	99-136						
PVG07_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	113-145						
PVG07_VARV	PROTEIN G7	VARIOLA VIRUS	113-145						
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	303-338						
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	266-301						
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	303-338						
PVG11_HSVII	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	150-183						
PVG12_HSVII	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	206-243						
PVG12_HSVSA	HYPOTHETICAL GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-106						
PVG1_SPVIR	CAPSID PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	254-292	303-337	414-452				
PVG22_HSVII	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	300-337	647-678					
PVG23_HSVII	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	70-108						
PVG26_HSVII	HYPOTHETICAL GENE 26 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	94-125						
PVG27_HSVSA	HYPOTHETICAL GENE 27 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	36-74						
PVG28_HSVII	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	491-521						
PVG2R_AMEPV	HYPOTHETICAL G2R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	180-217						
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	209-244						
PVG35_HSVII	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	15-46	190-226					
PVG36_HSVSA	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	151-185						
PVG39_HSVII	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	543-577	648-682					
PVG40_HSVSA	HYPOTHETICAL GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-216						
PVG41_HSVII	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45	202-233					
PVG42_HSVII	HYPOTHETICAL GENE 42 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	91-125						
PVG43_HSVII	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	109-140	157-185					
PVG46_HSVII	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	888-925						
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	329-357						
PVG50_HSVSA	PROBABLE TRANSCRIPTION ACTIVATOR EDRF1	HERPESVIRUS SAIMIRI (STRAIN 11)	113-141						
PVG51_HSVII	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	29-64	84-120					
PVG52_HSVII	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	96-134						
PVG55_HSVII	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	100-129						
PVG56_HSVII	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	364-396	631-667	1091-1126				
PVG58_HSVII	HYPOTHETICAL GENE 58 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	342-375	480-508					
PVG58_HSVSA	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	25-60	195-233					
PVG59_HSVII	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	82-118						
PVG61_HSVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	76-109						
PVG64_HSVII	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	55-89	363-401.	420-452				
PVG65_HSVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	801-836	1146-1174	1290-1326				
PVG67_HSVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	1150-1185						
PVG6_SPVIR	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	60-89						
PVG71_HSVSA	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	128-158						
PVG72_HSVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	445-478	720-751	1158-1189	1252-1285			
PVG75_HSVII	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	263-291	387-422					

PCGENE	P1JCTLZIP	All Viruses (no bacteriophages)							
ENTRYNAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVG76_HSV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	187-221						
PVGT_SPV1R	GENE 7 PROTEIN	SPIROPLASMA VIRUS SPV1-RBA2 B	18-46						
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	1719-1747	1856-1891	2109-2146	3601-3633			
PVGH1_HCMVA	GLYCOPROTEIN H)301 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-115	157-185					
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	1259-1294						
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	651-681						
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	1259-1294						
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	1259-1294						
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	1259-1294						
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	1259-1294						
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	1053-1088						
PVGL2_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	1267-1304						
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59	1215-1252						
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	1267-1304						
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	1126-1163						
PVGL2_CVPFS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	632-665	736-764	1328-1363				
PVGL2_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	632-665	736-764	1328-1363				
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	630-663	734-762	1326-1361				
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	630-663	734-762	1326-1361				
PVGL2_CVPRE	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS	512-540	1104-1139					
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4) (PRCV)	408-441	512-540	1104-1139				
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB	630-663	734-762	1326-1361				
PVGL2_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146) (FIPV)	635-668	739-767	1331-1366				
PVGL2_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	153-188						
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-147	706-743					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	116-147	707-744					
PVGLB_HSV6U	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-110						
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	254-288						
PVGLB_HSVB2	GLYCOPROTEIN H-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV) (BOVINE MAMMILLITIS VIRUS	745-774						
PVGLB_HSVBC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER	253-287						
PVGLB_ILTV6	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 632) (ILTV)	442-472						
PVGLB_ILTVS	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2) (ILTV)	452-482						
PVGLB_ILTVT	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882) (ILTV)	452-482						
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-163	738-776					
PVGLC_HSV1I	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	467-500						
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	467-500						
PVGLC_HSV2	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	435-465						
PVGLC_HSV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN JJJ)	436-466						
PVGLC_HSVBC	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-507						
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	351-388	513-548					
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT) (VZV)	351-388	513-548					
PVGLD_HSVEA	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AH1) (EHV-1)	340-370						
PVGLD_HSVI1	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-70	390-420					
PVGLD_HSVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-70	390-420					
PVGLE_HSVE4	GLYCOPROTEIN E	EQUINE HERPESVIRUS TYPE 4	95-125						
PVGLE_HSVER	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	63-100	390-420					
PVGLE_HSVEL	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	63-100	392-422					
PVGLF_PRVRI	GLYCOPROTEIN G PRECURSOR	PSEUDORABIES VIRUS (STRAIN RICE) (PRV)	392-369						
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908) (BRS)	263-301	482-511					
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN) (BRS)	484-513						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94) (BRS)	484-513						
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	562-596						
PVGLF_HRSV1	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	484-513						
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	484-513						
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	484-513						
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	484-513						
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)	224-256	451-484					

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PCGENE	P23C11.ZIP
FILENAME	PROTEIN
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_PIIHC	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR (
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR
PVGLG_VSVJO	SPIKE GLYCOPROTEIN PRECURSOR
PVGLG_VSVO	SPIKE GLYCOPROTEIN PRECURSOR
PVGLG_VSVSJ	SPIKE GLYCOPROTEIN PRECURSOR
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR
PVGLI_HCMVA	IMMEDIATE EARLY GLYCOPROTEIN PRECURSOR
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR
PVGLM_BUNLT	M POLYPROTEIN PRECURSOR
PVGLM_BUNSB	M POLYPROTEIN PRECURSOR
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR
PVGLM_HANTA	M POLYPROTEIN PRECURSOR
PVGLM_HANTH	M POLYPROTEIN PRECURSOR
PVGLM_HANTL	M POLYPROTEIN PRECURSOR
PVGLM_HANTV	M POLYPROTEIN PRECURSOR
PVGLM_INSV	M POLYPROTEIN PRECURSOR
PVGLM_PHV	M POLYPROTEIN PRECURSOR
PVGLM_PTPV	M POLYPROTEIN PRECURSOR
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR
PVGLM_RVFV	M POLYPROTEIN PRECURSOR
PVGLM_RVFVZ	M POLYPROTEIN PRECURSOR
PVGLM_SEOHB	M POLYPROTEIN PRECURSOR
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR
PVGLM_UUK	M POLYPROTEIN PRECURSOR
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR

All Viruses (no bacteriophages)							
VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
MEASLES VIRUS (STRAIN IP-3-CA)	227-259	454-487					
MEASLES VIRUS (STRAIN YAMAGATA-1)	224-256	451-484					
MUMPS VIRUS (STRAIN SBL-1)	5-38	446-474					
MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	446-474						
MUMPS VIRUS (STRAIN RW)	446-474						
MUMPS VIRUS (STRAIN SBL)	5-38	446-474					
NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45) (NDV)	132-165						
NEWCASTLE DISEASE VIRUS (STRAIN LAS/46) (NDV)	132-165						
PHOCINE DISTEMPER VIRUS	531-565						
HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-484						
BOVINE PARAINFLUENZA 3 VIRUS	453-481						
HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885	453-481						
RINDERPEST VIRUS (STRAIN KABETE O) (RDV)	220-252	447-480					
RINDERPEST VIRUS (STRAIN L) (RDV)	220-252	447-480					
SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-488						
SENDAI VIRUS (STRAIN FUSHIMI)	460-488						
SENDAI VIRUS (STRAIN HARRIS)	460-488						
SENDAI VIRUS (STRAIN HVJ)	460-488						
SENDAI VIRUS (STRAIN Z)	460-488						
SIMIAN VIRUS 5 (STRAIN WJ) (SV5)	446-474						
TURKEY RHINOTRACHEITIS VIRUS (TRTV)	452-481						
EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	327-364						
SONCHUS YELLOW NET VIRUS (SYNV)	524-553						
VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	450-488						
VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	457-492						
VESICULAR STOMATITIS VIRUS (STRAIN ORSAY)	450-488						
VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	450-488						
HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	691-719						
HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	690-718						
HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	215-247	640-677					
EQUINE HERPESVIRUS TYPE 4	814-850						
EQUINE HERPESVIRUS TYPE 1	807-843						
HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-194						
BUNYAVIRUS GERMISTON	197-227	438-468	982-1020	1049-1084			
BUNYAVIRUS LA CROSSE (ISOLATE L74)	190-220						
BUNYAVIRUS SNOWSHOE HARE	190-220	344-381					
BUNYAMWERA VIRUS	193-228	434-472	823-854				
DUGBE VIRUS	244-271	637-672	886-915	915-965	1403-1441		
HANTAAN VIRUS (STRAIN B-1) (KOREAN HEMORRHAGIC FEVER VIRUS)	610-641	1081-1119					
HANTAAN VIRUS (STRAIN HOJO)	188-222	612-643	1082-1120				
HANTAAN VIRUS (STRAIN LEE)	188-222	612-643	1083-1121				
HANTAAN VIRUS (STRAIN 76-118)	188-222	612-643	1083-1121				
IMPATIENS NECROTIC SPOT VIRUS (INSV)	269-307	1028-1062					
PROSPECT HILL VIRUS (PHV)	616-649	1088-1121					
PUNTA TORO PHLEBOVIRUS	949-982	1275-1309					
PUUMALA VIRUS (STRAIN HALLNAS B1)	620-653	1092-1125					
PUUMALA VIRUS (STRAIN SOTKAMO)	620-653	1092-1125					
RIFT VALLEY FEVER VIRUS (RVFV)	620-650	830-863					
RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	620-650	830-863	1156-1185				
SEOUL VIRUS (STRAIN 80-39)	610-641	1081-1119					
SEOUL VIRUS (STRAIN B22)	605-641	1082-1120					
SEOUL VIRUS (STRAIN SR-11) (SAPPORO RAT VIRUS)	610-641	1081-1119					
UUKUNIEMI VIRUS (UUK)	431-468	966-995					
BERNE VIRUS (BEV)	1491-1526						
JUNIN ARENAVIRUS	12-45						
LASSA VIRUS (STRAIN GA391)	237-265						
LASSA VIRUS (STRAIN NIGERIA)	238-266						

PCGENE	P33CT1.ZIP	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILENAME	PROTEIN	VIRUS							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-50						
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-50						
PVGLY_TACV3	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V3	12-50	89-124					
PVGLY_TACV1	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V1)	12-50	89-124					
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-50	89-124					
PVGNB_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS (CPMV)	1527-1535						
PVGNM_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS (CPMV)	209-242	741-771					
PVGNM_CPSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	50-86	479-515					
PVGNM_RCMV	GENOME POLYPROTEIN M	RED CLOVER MOTTLE VIRUS (RCMV)	766-799						
PVGP3_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111						
PVGP3_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111						
PVH02_VACCC	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-89						
PVH02_VACCV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN WR)	54-89						
PVH02_VARV	LATE PROTEIN H2	VARIOLA VIRUS							
PVH05_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	115-149						
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	115-149						
PVH05_VARV	PROTEIN H5	VARIOLA VIRUS	133-167						
PVHEL_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS (LSV)	107-143						
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-82						
PVI01_VARV	PROTEIN I1	VARIOLA VIRUS	54-82						
PVI06_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	55-88						
PVI06_VARV	PROTEIN I6	VARIOLA VIRUS	55-88						
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	591-624						
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	591-624						
PVI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	591-624						
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	243-271						
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	243-271						
PVIF_BIV06	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106) (BIV)	42-78						
PVIF_BIV27	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	42-78						
PVIF_SIVGB	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	46-78						
PVIF_SIVMK	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	82-111						
PVINP_EBV	PROBABLE INTEGRAL MEMBRANE PROTEIN BNRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	125-159						
PVINP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	68-100						
PVINP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-114	136-171	250-282				
PVINP_HSV1B	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	24-56	93-127	145-180	332-361			
PVINP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-111						
PVINT_SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE (SSV1	253-291						
PVJ05_VACCC	PROTEIN J5	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-85						
PVJ05_VACCV	PROTEIN J5	VACCINIA VIRUS (STRAIN WR)	54-85						
PVJ05_VARV	PROTEIN J5	VARIOLA VIRUS	54-85						
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-120						
PVK04_VACCV	PROTEIN K4	VACCINIA VIRUS (STRAIN WR)	87-120						
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	74-103						
PVK05_VACCV	PROTEIN K5	VACCINIA VIRUS (STRAIN WR)	87-116						
PVL02_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-76						
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-76						
PVL02_VARV	PROTEIN L2	VARIOLA VIRUS	39-76						
PVL03_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	292-322						
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	292-322						
PVL03_VARV	PROTEIN L3	VARIOLA VIRUS	291-321						
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	16-45						
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-45						
PVL1_HPV1B	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1B	373-406						
PVL2_CRPVK	PROBABLE L2 PROTEIN	CRPV	26-57						
PVL2_HPV05	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	27-57						
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	27-57						
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	26-56						

PCGENE	P3SCTL2IP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVL2_HPV39	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	29-59	285-313					
PVL2_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	344-379						
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	26-57						
PVL2_HPV51	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	29-59						
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	27-57						
PVL2_HPVME	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	29-59						
PVL2_PCPV1	PROBABLE L2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	29-59						
PVL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-177	686-718					
PVM11_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING	280-318	324-361					
PVM11_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	280-318						
PVM1I1_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199						
PVM1I2_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199						
PVM12_REOVJ	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN D5/JONES)	168-199						
PVM12_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-199						
PVM13_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	333-364						
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	308-342						
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	122-150						
PVME1_CVBN	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	64-102						
PVME1_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	64-102						
PVME1_CVMA5	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	65-103						
PVME1_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	65-103						
PVME1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS (TCV)	64-102						
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	73-101						
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42) (IBV)	73-101						
PVMEM_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	178-213						
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS (CERV)	93-126						
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	66-98	273-303					
PVMSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 55) (DHBV)	201-238	269-302					
PVMSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA) (DHBV)	194-227	268-301					
PVMSA_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (DHBV)	157-190	231-264					
PVMSA_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WINTE SHANGHAI DUCK ISOLATE 511) (DHBV)	194-228	269-302					
PVMSA_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS (GSHV)	209-243	271-307					
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	159-195	236-269					
PVMSA_HPBV0	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	70-98						
PVMSA_HPBV2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	244-272						
PVMSA_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	244-272						
PVMSA_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-272						
PVMSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	233-261						
PVMSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	70-98						
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-261						
PVMSA_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PJDW233)	233-261						
PVMSA_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE)	233-261						
PVMSA_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADR / STRAIN NC-1)	70-98						
PVMSA_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	233-261						
PVMSA_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	244-272						
PVMSA_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	244-272						
PVMSA_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	70-98						
PVMSA_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	233-261						
PVMSA_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	233-261						
PVMSA_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	233-261						
PVMSA_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-241	269-305					
PVMSA_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	212-246	274-310					
PVMSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-246	274-310					
PVMSA_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-246	274-310					
PVMSA_WHV8I	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	212-246	274-305					
PVMSA_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR 1	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS23)	125-161						
PVM17_IAZH	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	10-42						

PCGENE	PIRCTLZIP
FILENAME	PROTEIN
PVNIT8_MYXVL	M-T8 PROTEIN
PVNIT9_MYXVL	MT-9 PROTEIN
PVNN2_VACCC	PROTEIN N2
PVNN2_VACCV	PROTEIN N2
PVNN2_VARV	PROTEIN N2
PVNN4_ROTPC	NONSTRUCTURAL PROTEIN NS34
PVNCA_AAV2	DNA REPLICATION PROTEIN
PVNCS_PAVHO	PROBABLE NONCAPSID PROTEIN NS1
PVNS1_AIISV4	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS1
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1
PVNS1_IAZ11	NONSTRUCTURAL PROTEIN NS1
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1
PVNS2_IIRSV1	NONSTRUCTURAL PROTEIN 2
PVNS2_IIRSVA	NONSTRUCTURAL PROTEIN 2
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2
PVNS4_CVMS	NONSTRUCTURAL PROTEIN 4
PVNS4_CVPFS	NONSTRUCTURAL PROTEIN 4
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4
PVNST_CVMAS	30 KD NONSTRUCTURAL PROTEIN
PVNST_CVMJH	30 KD NONSTRUCTURAL PROTEIN
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2
PVNST_INCIH	NONSTRUCTURAL PROTEINS NS1-NS2
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2
PVNUA_PRVKA	PROBABLE NUCLEAR ANTIGEN
PVNUC_IHIVH	NUCLEOPROTEIN

All Viruses (no bacteriophages)							
VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
MYXOMA VIRUS (STRAIN LAUSANNE)	5-34	141-170					
MYXOMA VIRUS (STRAIN LAUSANNE)	246-282						
VACCINIA VIRUS (STRAIN COPENHAGEN	31-68						
VACCINIA VIRUS (STRAIN WR)	31-68						
VARIOLA VIRUS	31-68						
PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	336-366						
ADENO-ASSOCIATED VIRUS 2 (AAV2)	163-196	365-401					
BOVINE PARVOVIRUS (BPV)	180-217	346-377	439-471				
AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	351-380						
INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	114-144						
INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	114-144						
INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	114-144						
INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	107-144						
INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	104-141						
INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	107-144						
INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	104-141						
INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	104-141						
INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	114-144						
INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	114-144						
INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	107-144						
INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	114-144						
INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	114-144						
INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	107-144						
INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	107-144						
INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	107-144						
INFLUENZA A VIRUS (STRAIN A/MYNA/HANEDA-TIIA/76)	104-141						
INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	107-144						
INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	107-144						
INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	107-144						
INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	107-144						
INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	114-144						
INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GILIT/1492-B/82)	107-144						
INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	107-144						
INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	104-141						
INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	107-144						
INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	114-144						
INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	114-144						
INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	107-144						
INFLUENZA B VIRUS (STRAIN B/PA/79)	266-295						
INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-255						
INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-255						
HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	20-49						
HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	20-49						
INFLUENZA B VIRUS (STRAIN B/LEE/40	48-77						
INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	48-77						
MURINE CORONAVIRUS MHV (STRAIN S)	17-45						
PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS77	4-34						
PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR	4-39						
PORCINE RESPIRATORY CORONAVIRUS	4-39						
MURINE CORONAVIRUS MHV (STRAIN A59)	45-80						
MURINE CORONAVIRUS MHV (STRAIN JHM)	49-84						
INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-255						
INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-255						
INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-255						
INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-255						
PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	756-784						
HERPES VIRUS (STRAIN SIMIAN/11/61) (SHV1)	397-311	441-470					

PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	354-388						
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	354-388						
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	354-388						
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/86)	354-388						
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-46						
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-46						
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN	511-539	550-581					
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	511-539						
PVORI_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	121-150	641-671					
PVORI_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	1667-1703						
PVORI_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYEAV)	121-153						
PVP03_HSVSA	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	462-493						
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	4-38						
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	4-38						
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	260-291						
PVP19_HSVEB	CAPSID ASSEMBLY AND DNA MATURATION PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	239-268	287-325					
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-172						
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	46-79	206-238					
PVP23_HSVEB	PROBABLE CAPSID PROTEIN VP23	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	18-48						
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	224-253						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	408-441						
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	649-683						
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	558-586	649-683					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	391-424	564-593					
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	654-688						
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	654-688						
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	878-915						
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	334-367	522-557					
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	334-367	523-558					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	342-377	532-567					
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	514-549	589-617	811-841				
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	335-368	523-558					
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-311						
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-311						
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-312						
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	107-141						
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	383-412	734-770					
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	383-412	734-770					
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	297-330						
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	652-688						
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	429-457						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11	119-152						
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882) (ILTV)	84-119						
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV	485-518						
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	239-270						
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	553-591						
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	553-591						
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	554-592						
PVP4_ROTGH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	93-122	468-499					
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	278-308	624-659					
PVP5_BRD	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	96-133	295-326					
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	295-324						
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-324						
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-324						
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	290-325						
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	691-719						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	159-187						

PCGENE	P3XCTLZIP
FILENAME	PROTEIN
PVP62_BTV10	VP6 PROTEIN
PVP62_NIRDV	PROBABLE NONSTRUCTURAL 36.3 KD PROTEIN
PVP64_NPVOP	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN
PVP6_BTV11	VP6 PROTEIN
PVP6_BTV17	VP6 PROTEIN
PVP6_BTV1S	VP6 PROTEIN
PVP6_BTV2A	VP6 PROTEIN
PVP6_WTV	STRUCTURAL PROTEIN P6
PVP6_WTVNI	STRUCTURAL PROTEIN P6
PVP79_NPVAC	79 KD PROTEIN
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7
PVP87_NPVOP	CAPSID PROTEIN P87
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8
PVP8_RDV	OUTER CAPSID PROTEIN P8
PVP8_WTV	OUTER CAPSID PROTEIN P8
PVP9E_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN
PVP9E_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN
PVPR_HV1A2	VPR PROTEIN
PVPR_HV2BE	VPR PROTEIN
PVPR_HV2CA	VPR PROTEIN
PVPR_HV2D1	VPR PROTEIN
PVPR_HV2D2	VPR PROTEIN
PVPR_HV2NZ	VPR PROTEIN
PVPR_HV2RO	VPR PROTEIN
PVPR_HV2SB	VPR PROTEIN
PVPR_HV2ST	VPR PROTEIN
PVPR_SIVCZ	VPR PROTEIN
PVPR_SIVMH	VPR PROTEIN
PVPR_SIVMK	VPR PROTEIN
PVPR_SIVMM	VPR PROTEIN
PVPR_SIVS4	VPR PROTEIN
PVPR_SIVSP	VPR PROTEIN
PVPU_HV1B1	VPU PROTEIN
PVPU_HV1B8	VPU PROTEIN
PVPU_HV1BN	VPU PROTEIN
PVPU_HV1BR	VPU PROTEIN
PVPU_HV1H2	VPU PROTEIN
PVPU_HV1JR	VPU PROTEIN
PVPU_HV1PV	VPU PROTEIN
PVPU_ISRV	VPU PROTEIN
PVPX_LDV	VPX PROTEIN
PVPY_BIV2	ORF-Y PROTEIN
PVRNA_BSMV	ALPHA-A PROTEIN
PVS05_ROTHI	NONSTRUCTURAL PROTEIN NCVP2
PVS05_ROTSC	NONSTRUCTURAL PROTEIN NS53
PVS05_ROTSI	NONSTRUCTURAL PROTEIN NCVP2
PVS06_ROTBR	VP6 PROTEIN
PVS06_ROTBS	VP6 PROTEIN
PVS06_ROTBU	VP6 PROTEIN

All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
VIRUS	155-183	210-245					
BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	25-61	222-257					
MAIZE ROUGH DWARF VIRUS (MRDV)	285-313						
ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	281-316						
AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	198-233						
GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GMNPV)	155-183						
BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	155-183						
BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	159-187						
BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	131-159						
BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	180-209						
WOUND TUMOR VIRUS (WTV)	180-209						
WOUND TUMOR VIRUS (STRAIN NI) (WTV)	405-442						
AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	454-490						
WOUND TUMOR VIRUS (WTV)	77-112						
ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	104-139						
BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-139						
BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-139						
BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-139						
BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-139						
BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-139						
BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-139						
BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	374-412						
RICE DWARF VIRUS (RDV)	164-195	379-412					
WOUND TUMOR VIRUS (WTV)	145-173						
AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	122-151						
ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	37-74						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205,7) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY) (HIV-2)	41-73						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST) (HIV-2)	40-72						
CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	37-74						
SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE) (SIV-MAC)	37-69						
SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	37-69						
SIMIAN IMMUNODEFICIENCY VIRUS (K7M ISOLATE) (SIV-MAC)	37-69						
SIMIAN IMMUNODEFICIENCY VIRUS (L210/SMH4 ISOLATE) (SOOTY MANGA	37-69						
SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE) (SOOTY MANGAB	3-33						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE,HXB3 ISOLATE	4-33						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE) (HIV-1)	3-34						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (HIV-1)	3-33						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV-1)	4-33						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	3-34						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (HIV-1)	3-33						
HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HIV-1)	116-154						
SHEEP PULMONARY ADENOMATOSIS VIRUS	25-55						
LACTATE DEHYDROGENASE-ELEVATING VIRUS (LDV)	35-71						
BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	290-319	676-705					
BARLEY STRIPE MOSAIC VIRUS (BSMV)	198-230						
HUMAN ROTAVIRUS (STRAIN IGV-88-3)	88-119	358-392					
PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	315-347						
SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-92						
BOVINE ROTAVIRUS (STRAIN RF)	64-92	312-340					
BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	55-92						
BOVINE ROTAVIRUS (STRAIN UK)							

WU 96/19495

PCGENE	P33CTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	55-92						
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	55-92						
PVS06_ROTHI	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	55-92						
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-92	312-340					
PVS06_ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	55-92						
PVS06_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	55-92	313-349					
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN	64-92						
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	55-92	313-349					
PVS06_ROTSI	VP6 PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-92	313-349					
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-302						
PVS09_ROTHT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	131-159						
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	131-159						
PVS10_ROTBN	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN NCDV)	52-89						
PVS10_ROTBU	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN UK)	52-89						
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A2B)	52-89						
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	52-89						
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6	52-89						
PVS10_ROTHW	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	52-89						
PVS10_ROTSI	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	52-89						
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	99-130						
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	346-384						
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-147						
PVT1_SFVKA	PROTEIN T1 PRECURSOR	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	147-182						
PVT2_MYXVL	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	MYXOMA VIRUS (STRAIN LAUSANNE)	261-290						
PVT2_SFVKA	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	211-249						
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	116-150						
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	166-199	505-543					
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-209						
PVTER_HSVI1	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	756-788						
PVX_SEND6	X PROTEIN	SENDAI VIRUS (STRAIN 6/94)	57-93						
PY104_ADE07	HYPOTHETICAL 104 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	55-83						
PY10K_MSVS	HYPOTHETICAL 10.9 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE) (MSV)	24-54						
PY10K_WDV	HYPOTHETICAL 10 KD PROTEIN	WHEAT DWARF VIRUS (WDV)	22-59						
PY119_SSV1	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	29-64						
PY11K_PASV	HYPOTHETICAL 11.9 KD PROTEIN (ORF V1)	PANICUM STREAK VIRUS	29-61						
PY11K_ROTSI	HYPOTHETICAL 11 KD PROTEIN IN SEGMENT S11	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	53-87						
PY11K_TYDVA	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	28-62						
PY14K_NPVAC	HYPOTHETICAL 13.8 KD PROTEIN IN 39 KD PROTEIN 5'REG	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	65-101.						
PY18K_SSV1	HYPOTHETICAL 18.0 KD PROTEIN (ORF B-166)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-132.						
PY20K_SSV1	HYPOTHETICAL 20.4 KD PROTEIN (ORF E-478)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	129-167.						
PY21K_MSVN	HYPOTHETICAL 21.7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE) (MSV)	122-155.						
PY2_SOCMV	HYPOTHETICAL PROTEIN 2 (ORF II)	SOYBEAN CHLOROTIC MOTTLE VIRUS	99-137						
PY35K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN (ORF2)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	250-282						
PY85K_SSV1	HYPOTHETICAL 85.7 KD PROTEIN (ORF C-792)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	274-312	543-580					
PYB1J_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN (FRAGMENT)	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-150						
PYDH1_HSVSC	HYPOTHETICAL 28.7 KD PROTEIN IN DHFR 3'REGION (ORF	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-244						
PYDH3_HSVSC	HYPOTHETICAL 9.5 KD PROTEIN IN DHFR 3'REGION (ORF3	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-97.						
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	34-68						
PYI01_CVBM	HYPOTHETICAL PROTEIN 1ORF1	BOVINE CORONAVIRUS	84-122						
PYI0R_CVBF	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (1ORF)	BOVINE CORONAVIRUS (STRAIN F15)	41-75	137-165					
PYI0R_CVBM	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (1ORF)	BOVINE CORONAVIRUS (STRAIN MEBUS)	41-74	137-165.					
PYI0R_CVTKE	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (1ORF)	TURKEY ENTERIC CORONAVIRUS (TCV)	41-74	137-165					
PYKR3_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-100						
PYMR2_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	250-284						
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN (ORF1)	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	93-130	166-198					
PYOR3_COYMV	HYPOTHETICAL 15 KD PROTEIN (ORF2)	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	23-56						
PYOR3_PVXXC	HYPOTHETICAL 12 KD PROTEIN (ORF 3) (FRAGMENT)	POTATO VIRUS X (STRAIN XC) (PVX)	7-39						

PCGENE	PIRCTL2IP	All Viruses (no bacteriophage)							
		VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
ELEMANIE	PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	63-94						
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	64-95						
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN (ORF 3)		217-272						
PYOR3_WCMVO	HYPOTHETICAL 31.3 KD PROTEIN (ORF 5)	AVIAN ADENOVIRUS GAL	5-34						
PYOR3_ADEGI	HYPOTHETICAL 31.3 KD PROTEIN (ORF 5)	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	233-263						
PYORG_TTV1	HYPOTHETICAL 7.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	91-124						
PYORJ_TTV1	HYPOTHETICAL 38.6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	104-133	159-191					
PYORP_TTV1	HYPOTHETICAL 20.2 KD PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	104-133	159-191					
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN (ORF 1	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTBV)	23-51						
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN (ORF 1)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	180-216						
PYP47_NPVAC	HYPOTHETICAL 41.5 KD PROTEIN IN P47 3'REGION	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	113-42						
PYRF5_HSV6G	HYPOTHETICAL PROTEIN RF5	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	92-120						
PYRJ3_EBV	HYPOTHETICAL BRRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	306-336						
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	21-53						
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-49						
PYVAE_VACCC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGEN)	22-53						
PYVAL_VACCV	HYPOTHETICAL 9.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-64						
PYVBC_VACCC	HYPOTHETICAL 10.8 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGEN)	8-42						
PYVDG_VACCV	HYPOTHETICAL 10.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-35						
PYVEF_VACCC	HYPOTHETICAL 13.9 KD PROTEIN	VACCINIA VIRUS (STRAIN ADAMSTRONG)	29-57						
PYVFC_VACCC	HYPOTHETICAL 11.6 KD PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN PASTEUR)	8-33						
PZNFP_LYCVA	ZINC FINGER PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN PASTEUR)							
PZNFP_LYCVP	ZINC FINGER PROTEIN (FRAGMENT)								

TABLE XV
RESPIRATORY SYNCYTIAL VIRUS DP107 F2 REGION ANALOG
CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSV-Z
X-YTSVI-Z
X-YTSVIT-Z
X-YTSVITI-Z
X-YTSVITIE-Z
X-YTSVITIEL-Z
X-YTSVITIELS-Z
X-YTSVITIELSN-Z
X-YTSVITIELSNI-Z
X-YTSVITIELSNIK-Z
X-YTSVITIELSNIKE-Z
X-YTSVITIELSNIKEN-Z
X-YTSVITIELSNIKENK-Z
X-YTSVITIELSNIKENKC-Z
X-YTSVITIELSNIKENKCN-Z
X-YTSVITIELSNIKENKCNG-Z
X-YTSVITIELSNIKENKCNGT-Z
X-YTSVITIELSNIKENKCNGTD-Z
X-YTSVITIELSNIKENKCNGTDA-Z
X-YTSVITIELSNIKENKCNGTDAK-Z
X-YTSVITIELSNIKENKCNGTDAKV-Z
X-YTSVITIELSNIKENKCNGTDAKVK-Z
X-YTSVITIELSNIKENKCNGTDAKVKL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLI-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELD-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKY-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVT-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLM-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQS-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVI
RESPIRATORY SYNCYTIAL VIRUS F2 DP178/DP107 REGION ANALOG
AMINO TRUNCATIONS

X-QST-Z
X-MQST-Z
X-LMQST-Z
X-LLMQST-Z
X-QLLMQST-Z
X-LQLLMQST-Z
X-ELQLLMQST-Z
X-TELQLLMQST-Z
X-VTELQLLMQST-Z
X-AVTELQLLMQST-Z
X-NAVTELQLLMQST-Z
X-KNAVTELQLLMQST-Z
X-YKNAVTELQLLMQST-Z
X-KYKNAVTELQLLMQST-Z
X-DKYKNAVTELQLLMQST-Z
X-LDKYKNAVTELQLLMQST-Z
X-ELDKYKNAVTELQLLMQST-Z
X-QELDKYKNAVTELQLLMQST-Z
X-KQELDKYKNAVTELQLLMQST-Z
X-IKQELDKYKNAVTELQLLMQST-Z
X-LIKQELDKYKNAVTELQLLMQST-Z
X-KLIKQELDKYKNAVTELQLLMQST-Z
X-VKLIKQELDKYKNAVTELQLLMQST-Z
X-KVKLIKQELDKYKNAVTELQLLMQST-Z
X-AKVKLIKQELDKYKNAVTELQLLMQST-Z
X-DAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-GTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-CNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-LSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
CARBOXY TRUNCATIONS

X-FYD-Z
X-FYDP-Z
X-FYDPL-Z
X-FYDPLV-Z
X-FYDPLVF-Z
X-FYDPLVFP-Z
X-FYDPLVFPS-Z
X-FYDPLVFPSD-Z
X-FYDPLVFPSDE-Z
X-FYDPLVFPSDEF-Z
X-FYDPLVFPSDEFD-Z
X-FYDPLVFPSDEFDA-Z
X-FYDPLVFPSDEFDAS-Z
X-FYDPLVFPSDEFDASI-Z
X-FYDPLVFPSDEFDASIS-Z
X-FYDPLVFPSDEFDASISQ-Z
X-FYDPLVFPSDEFDASISQV-Z
X-FYDPLVFPSDEFDASISQVN-Z
X-FYDPLVFPSDEFDASISQVNE-Z
X-FYDPLVFPSDEFDASISQVNEK-Z
X-FYDPLVFPSDEFDASISQVNEKI-Z
X-FYDPLVFPSDEFDASISQVNEKIN-Z
X-FYDPLVFPSDEFDASISQVNEKINQ-Z
X-FYDPLVFPSDEFDASISQVNEKINQS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLA-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAF-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFI-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIR-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRK-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSD-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDE-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDEL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier

group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVIII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
AMINO TRUNCATIONS

X-DELL-Z
X-SDELL-Z
X-KSDELL-Z
X-RKSDELL-Z
X-IRKSDELL-Z
X-FIRKSDELL-Z
X-AFIRKSDELL-Z
X-LAFIRKSDELL-Z
X-SLAFIRKSDELL-Z
X-QSLAFIRKSDELL-Z
X-NQSLAFIRKSDELL-Z
X-INQSLAFIRKSDELL-Z
X-KINQSLAFIRKSDELL-Z
X-EKINQSLAFIRKSDELL-Z
X-NEKINQSLAFIRKSDELL-Z
X-VNEKINQSLAFIRKSDELL-Z
X-QVNEKINQSLAFIRKSDELL-Z
X-SQVNEKINQSLAFIRKSDELL-Z
X-ISQVNEKINQSLAFIRKSDELL-Z
X-SISQVNEKINQSLAFIRKSDELL-Z
X-ASISQVNEKINQSLAFIRKSDELL-Z
X-DASISQVNEKINQSLAFIRKSDELL-Z
X-FDASISQVNEKINQSLAFIRKSDELL-Z
X-EFDASISQVNEKINQSLAFIRKSDELL-Z
X-DEFDASISQVNEKINQSLAFIRKSDELL-Z
X-SDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-FPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-VFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-LVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-DPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-YDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XIX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
CARBOXY TRUNCATIONS

X-ITL-Z
X-ITLN-Z
X-ITLNN-Z
X-ITLNNS-Z
X-ITLNNSV-Z
X-ITLNNSVA-Z
X-ITLNNSVAL-Z
X-ITLNNSVALD-Z
X-ITLNNSVALDP-Z
X-ITLNNSVALDPI-Z
X-ITLNNSVALDPID-Z
X-ITLNNSVALDPIDI-Z
X-ITLNNSVALDPIDIS-Z
X-ITLNNSVALDPIDISI-Z
X-ITLNNSVALDPIDISIE-Z
X-ITLNNSVALDPIDISIEL-Z
X-ITLNNSVALDPIDISIELN-Z
X-ITLNNSVALDPIDISIELNK-Z
X-ITLNNSVALDPIDISIELNKA-Z
X-ITLNNSVALDPIDISIELNKAK-Z
X-ITLNNSVALDPIDISIELNKAKS-Z
X-ITLNNSVALDPIDISIELNKAKSD-Z
X-ITLNNSVALDPIDISIELNKAKSDL-Z
X-ITLNNSVALDPIDISIELNKAKSDLE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEES-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESK-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEW-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWI-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
AMINO TRUNCATIONS

X-RRS-Z
X-IRRS-Z
X-WIRRS-Z
X-EWIRRS-Z
X-KEWIRRS-Z
X-SKEWIRRS-Z
X-ESKEWIRRS-Z
X-EESKEWIRRS-Z
X-LEESKEWIRRS-Z
X-DLEESKEWIRRS-Z
X-SDLEESKEWIRRS-Z
X-KSDLEESKEWIRRS-Z
X-AKSDLEESKEWIRRS-Z
X-KAKSDLEESKEWIRRS-Z
X-NKAKSDLEESKEWIRRS-Z
X-LNKAKSDLEESKEWIRRS-Z
X-ELNKAKSDLEESKEWIRRS-Z
X-IELNKAKSDLEESKEWIRRS-Z
X-SIELNKAKSDLEESKEWIRRS-Z
X-ISIELNKAKSDLEESKEWIRRS-Z
X-DISIELNKAKSDLEESKEWIRRS-Z
X-IDISIELNKAKSDLEESKEWIRRS-Z
X-PIDISIELNKAKSDLEESKEWIRRS-Z
X-DPIDISIELNKAKSDLEESKEWIRRS-Z
X-LDPIDISIELNKAKSDLEESKEWIRRS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXI
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
CARBOXY TRUNCATIONS

X-ALG-Z
X-ALGV-Z
X-ALGVA-Z
X-ALGVAT-Z
X-ALGVATS-Z
X-ALGVATSA-Z
X-ALGVATSAQ-Z
X-ALGVATSAQI-Z
X-ALGVATSAQIT-Z
X-ALGVATSAQITA-Z
X-ALGVATSAQITAA-Z
X-ALGVATSAQITAAV-Z
X-ALGVATSAQITAAVA-Z
X-ALGVATSAQITAAVAL-Z
X-ALGVATSAQITAAVALV-Z
X-ALGVATSAQITAAVALVE-Z
X-ALGVATSAQITAAVALVEA-Z
X-ALGVATSAQITAAVALVEAK-Z
X-ALGVATSAQITAAVALVEAKQ-Z
X-ALGVATSAQITAAVALVEAKQA-Z
X-ALGVATSAQITAAVALVEAKQAR-Z
X-ALGVATSAQITAAVALVEAKQARS-Z
X-ALGVATSAQITAAVALVEAKQARSD-Z
X-ALGVATSAQITAAVALVEAKQARSDI-Z
X-ALGVATSAQITAAVALVEAKQARSDIE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKL-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEA-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAI-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAIR-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXII
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
AMINO TRUNCATIONS

X-IRD-Z
X-AIRD-Z
X-EAIRD-Z
X-KEAIRD-Z
X-LKEAIRD-Z
X-KLKEAIRD-Z
X-EKLKEAIRD-Z
X-IEKLKEAIRD-Z
X-DIEKLKEAIRD-Z
X-SDIEKLKEAIRD-Z
X-RSDIEKLKEAIRD-Z
X-ARSDIEKLKEAIRD-Z
X-QARSDIEKLKEAIRD-Z
X-KQARSDIEKLKEAIRD-Z
X-AKQARSDIEKLKEAIRD-Z
X-EAKQARSDIEKLKEAIRD-Z
X-VEAKQARSDIEKLKEAIRD-Z
X-LVEAKQARSDIEKLKEAIRD-Z
X-ALVEAKQARSDIEKLKEAIRD-Z
X-VALVEAKQARSDIEKLKEAIRD-Z
X-AVALVEAKQARSDIEKLKEAIRD-Z
X-AAVALVEAKQARSDIEKLKEAIRD-Z
X-TAAVALVEAKQARSDIEKLKEAIRD-Z
X-ITAAVALVEAKQARSDIEKLKEAIRD-Z
X-QITAAVALVEAKQARSDIEKLKEAIRD-Z
X-AQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-SAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-TSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-ATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-VATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-GVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-LGVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXIII
REPRESENTATIVE DP107/DP178 ANALOG ANTIVIRAL PEPTIDES

Anti-Respiratory syncytial virus peptides

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z

Anti-human parainfluenza virus 3 peptides

X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRSN-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRSNQ-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRSNQK-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRSNQKL-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRSNQKLD-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRSNQKLDS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRSNQKLDSI-Z
X-LDPIDISIELNKAKSDLEESKEWIRRSNQKLDSIG-Z
X-DPIDISIELNKAKSDLEESKEWIRRSNQKLDSIGN-Z
X-PIDISIELNKAKSDLEESKEWIRRSNQKLDSIGNW-Z
X-IDISIELNKAKSDLEESKEWIRRSNQKLDSIGNWH-Z
X-DISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQ-Z
X-ISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQS-Z
X-SIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSS-Z
X-IELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSST-Z
X-ELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSSTT-Z
X-TAAVALVEAKQARSDIEKLKEAIRDTNKAVQSVQS-Z

X-AVALVEAKQARSDIEKLKEAIRDTNKAVQSVQSSI-Z
X-LVEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNL-Z
X-VEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLI-Z
X-EAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIV-Z
X-AKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVA-Z
X-KQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAI-Z
X-QARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIK-Z
X-ARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKS-Z
X-RSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSV-Z
X-SDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQ-Z
X-KLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVN-Z
X-LKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNK-Z
X-AIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNKEIV-Z

Anti-simian immunodeficiency virus peptides

X-WQEWERKVDFLEENITALLEEAQIQQEKNMYELQK-Z
X-QEWERKVDFLEENITALLEEAQIQQEKNMYELQKL-Z
X-EWERKVDFLEENITALLEEAQIQQEKNMYELQKLN-Z
X-WERKVDFLEENITALLEEAQIQQEKNMYELQKLNS-Z
X-ERKVDFLEENITALLEEAQIQQEKNMYELQKLNSW-Z
X-RKVDFLEENITALLEEAQIQQEKNMYELQKLNSWD-Z
X-KVDFLEENITALLEEAQIQQEKNMYELQKLNSWDV-Z
X-VDFLEENITALLEEAQIQQEKNMYELQKLNSWDVF-Z
X-DFLEENITALLEEAQIQQEKNMYELQKLNSWDVFG-Z
X-FLEENITALLEEAQIQQEKNMYELQKLNSWDVFGN-Z

Anti-measles virus peptides

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEAKELL-Z
X-HRIDLGPPISLERLDVGTNLGNAIAKLEAKELLE-Z
X-RIDLGPPISLERLDVGTNLGNAIAKLEAKELLES-Z
X-IDLGPPISLERLDVGTNLGNAIAKLEAKELLESS-Z
X-DLGPPISLERLDVGTNLGNAIAKLEAKELLESSD-Z
X-LGPPISLERLDVGTNLGNAIAKLEAKELLESSDQ-Z
X-GPPISLERLDVGTNLGNAIAKLEAKELLESSDQI-Z
X-PPISLERLDVGTNLGNAIAKLEAKELLESSDQIL-Z
X-PISLERLDVGTNLGNAIAKLEAKELLESSDQILR-Z
X-SLERLDVGTNLGNAIAKLEAKELLESSDQILRSM-Z
X-LERLDVGTNLGNAIAKLEAKELLESSDQILRSMK-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

5.4. SYNTHESIS OF PEPTIDES

The peptides of the invention may be synthesized or prepared by techniques well known in the art. See, for example, Creighton, 1983, Proteins: Structures and Molecular Principles, W.H. Freeman and Co., NY, which is incorporated herein by reference in its entirety. Short peptides, for example, can be synthesized on a solid support or in solution. Longer peptides may be made using recombinant DNA techniques. Here, the nucleotide sequences encoding the peptides of the invention may be synthesized, and/or cloned, and expressed according to techniques well known to those of ordinary skill in the art. See, for example, Sambrook, et al., 1989, Molecular Cloning, A Laboratory Manual, Vols. 1-3, Cold Spring Harbor Press, NY.

The peptides of the invention may alternatively be synthesized such that one or more of the bonds which link the amino acid residues of the peptides are non-peptide bonds. These alternative non-peptide bonds may be formed by utilizing reactions well known to those in the art, and may include, but are not limited to imino, ester, hydrazide, semicarbazide, and azo bonds, to name but a few. In yet another embodiment of the invention, peptides comprising the sequences described above may be synthesized with additional chemical groups present at their amino and/or carboxy termini, such that, for example, the stability, bioavailability, and/or inhibitory activity of the peptides is enhanced. For example, hydrophobic groups such as carbobenzoxyl, dansyl, or t-butyloxycarbonyl groups, may be added to the peptides' amino termini. Likewise, an acetyl group or a 9-fluorenylmethoxy-carbonyl group may be placed at the peptides' amino termini. (See "X" in Tables I to IV,

above.) Additionally, the hydrophobic group, t-butyloxycarbonyl, or an amido group may be added to the peptides' carboxy termini. (See "Z" in Tables I to IV, above.)

Further, the peptides of the invention may be synthesized such that their steric configuration is altered. For example, the D-isomer of one or more of the amino acid residues of the peptide may be used, rather than the usual L-isomer.

Still further, at least one of the amino acid residues of the peptides of the invention may be substituted by one of the well known non-naturally occurring amino acid residues. Alterations such as these may serve to increase the stability, bioavailability and/or inhibitory action of the peptides of the invention.

Any of the peptides described above may, additionally, have a macromolecular carrier group covalently attached to their amino and/or carboxy termini. Such macromolecular carrier groups may include, for example, lipid-fatty acid conjugates, polyethylene glycol, carbohydrates or additional peptides. "X", in Tables I to IV, above, may therefore additionally represent any of the above macromolecular carrier groups covalently attached to the amino terminus of a peptide, with an additional peptide group being preferred. Likewise, "Z", in Tables I to IV, may additionally represent any of the macromolecular carrier groups described above.

5.5. ASSAYS FOR ANTI-MEMBRANE FUSION ACTIVITY

Described herein, are methods for ability of a compound, such as the peptides of the invention, to inhibit membrane fusion events. Specifically, assays for cell fusion events are described in Section 5.5.1,

below, and assays for antiviral activity are described in Section 5.5.2, below.

5.5.1 ASSAYS FOR CELL FUSION EVENTS

Assays for cell fusion events are well known to those of skill in the art, and may be used in conjunction, for example, with the peptides of the invention to test the peptides' antifusogenic capabilities.

Cell fusion assays are generally performed in vitro. Such an assay may comprise culturing cells which, in the absence of any treatment would undergo an observable level of syncytial formation. For example, uninfected cells may be incubated in the presence of cells chronically infected with a virus that induces cell fusion. Such viruses may include, but are not limited to, HIV, SIV, or respiratory syncytial virus.

For the assay, cells are incubated in the presence of a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added.

Standard conditions for culturing cells, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytial formation. Well known stains, such as crystal violet stain, may be used to facilitate the visualization of syncytial formation.

5.5.2 ASSAYS FOR ANTIVIRAL ACTIVITY

The antiviral activity exhibited by the peptides of the invention may be measured, for example, by

easily performed in vitro assays, such as those described below, which can test the peptides' ability to inhibit syncytia formation, or their ability to inhibit infection by cell-free virus. Using these assays, such parameters as the relative antiviral activity of the peptides, exhibit against a given strain of virus and/or the strain specific inhibitory activity of the peptide can be determined.

A cell fusion assay may be utilized to test the peptides' ability to inhibit viral-induced, such as HIV-induced, syncytia formation in vitro. Such an assay may comprise culturing uninfected cells in the presence of cells chronically infected with a syncytial-inducing virus and a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added. Standard conditions for culturing, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytia formation. Well known stains, such as crystal violet stain, may be used to facilitate syncytial visualization. Taking HIV as an example, such an assay would comprise CD-4$^+$ cells (such as Molt or CEM cells, for example) cultured in the presence of chronically HIV-infected cells and a peptide to be assayed.

Other well known characteristics of viral infection may also be assayed to test a peptide's antiviral capabilities. Once again taking HIV as an example, a reverse transcriptase (RT) assay may be utilized to test the peptides' ability to inhibit infection of CD-4$^+$ cells by cell-free HIV. Such an assay may comprise culturing an appropriate

concentration (i.e., $TCID_{50}$) of virus and CD-4$^+$ cells in the presence of the peptide to be tested. Culture conditions well known to those in the art are used. As above, a range of peptide concentrations may be used, in addition to a control culture wherein no peptide has been added. After incubation for an appropriate period (e.g., 7 days) of culturing, a cell-free supernatant is prepared, using standard procedures, and tested for the present of RT activity as a measure of successful infection. The RT activity may be tested using standard techniques such as those described by, for example, Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and/or Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). These references are incorporated herein by reference in their entirety.

Standard methods which are well-known to those of skill in the art may be utilized for assaying non-retroviral activity. See, for example, Pringle et al. (Pringle, C.R. et al., 1985, J. Medical Virology 17:377-386) for a discussion of respiratory syncytial virus and parainfluenza virus activity assay techniques. Further, see, for example, "Zinsser Microbiology", 1988, Joklik, W.K. et al., eds., Appleton & Lange, Norwalk, CT, 19th ed., for a general review of such techniques. These references are incorporated by reference herein in their entirety. In addition, the Examples presented below, in Sections 17, 18, 26 and 27 each provide additional assays for the testing of a compound's antiviral capability.

In vivo assays may also be utilized to test, for example, the antiviral activity of the peptides of the invention. To test for anti-HIV activity, for example, the in vivo model described in Barnett et al. (Barnett, S.W. et al., 1994, Science 266:642-646) may be used.

Additionally, anti-RSV activity can be assayed in vivo via well known mouse models. For example, RSV can be administered intranasally to mice of various inbred strains. Virus replicates in lungs of all strains, but the highest titers are obtained in P/N, C57L/N and DBA/2N mice. Infection of BALB/c mice produces an asymptomatic bronchiolitis characterized by lymphocytic infiltrates and pulmonary virus titers of 10^4 to 10^5 pfu/g of lung tissue (Taylor, G. et al., 1984, Infect. Immun. 43:649-655).

Cotton rat models of RSV are also well known. Virus replicates to high titer in the nose and lungs of the cotton rat but produces few if any signs of inflammation.

5.6. USES OF THE PEPTIDES OF THE INVENTION

The peptides of the invention may be utilized as antifusogenic or antiviral compounds, or as compounds which modulate intracellular processes involving coiled coil peptide structures. Further, such peptides may be used to identify agents which exhibit antifusogenic, antiviral or intracellular modulatory activity. Still further, the peptides of the invention may be utilized as organism or viral type/subtype-specific diagnostic tools.

The antifusogenic capability of the peptides of the invention may additionally be utilized to inhibit or treat/ameliorate symptoms caused by processes involving membrane fusion events. Such events may include, for example, virus transmission via cell-cell fusion, abnormal neurotransmitter exchange via cell-fusion, and sperm-egg fusion. Further, the peptides of the invention may be used to inhibit free viral, such as retroviral, particularly HIV, transmission to uninfected cells wherein such viral infection involves membrane fusion events or involves fusion of a viral

structure with a cell membrane. Among the intracellular disorders involving coiled coil peptides structures which may be ameliorated by the peptides of the invention are disorders involving, for example, bacterial toxins.

With respect to antiviral activity, the viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to all strains of the viruses listed above, in Tables V through VII, and IX through XIV.

These viruses include, for example, human retroviruses, particularly HIV-1 and HIV-2 and the human T-lymphocyte viruses (HTLV-I and II). The non-human retroviruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to bovine leukosis virus, feline sarcoma and leukemia viruses, simian immunodeficiency, sarcoma and leukemia viruses, and sheep progress pneumonia viruses.

Non retroviral viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to human respiratory syncytial virus, canine distemper virus, newcastle disease virus, human parainfluenza virus, influenza viruses, measles viruses, Epstein-Barr viruses, hepatitis B viruses, and simian Mason-Pfizer viruses.

Non enveloped viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to picornaviruses such as polio viruses, hepatitis A virus, enterovirus, echoviruses and coxsackie viruses, papovaviruses such as papilloma virus, parvoviruses, adenoviruses and reoviruses.

As discussed more fully, below, in Section 5.5.1 and in the Example presented, below, in Section 8, DP107, DP178, DP107 analog and DP178 analog peptides form non-covalent protein-protein interactions which

are required for normal activity of the virus. Thus, the peptides of the invention may also be utilized as components in assays for the identification of compounds that interfere with such protein-protein interactions and may, therefore, act as antiviral agents. These assays are discussed, below, in Section 5.5.1.

As demonstrated in the Example presented below in Section 6, the antiviral activity of the peptides of the invention may show a pronounced type and subtype specificity, i.e., specific peptides may be effective in inhibiting the activity of only specific viruses. This feature of the invention presents many advantages. One such advantage, for example, lies in the field of diagnostics, wherein one can use the antiviral specificity of the peptide of the invention to ascertain the identity of a viral isolate. With respect to HIV, one may easily determine whether a viral isolate consists of an HIV-1 or HIV-2 strain. For example, uninfected CD-4$^+$ cells may be co-infected with an isolate which has been identified as containing HIV the DP178 (SEQ ID:1) peptide, after which the retroviral activity of cell supernatants may be assayed, using, for example, the techniques described above in Section 5.2. Those isolates whose retroviral activity is completely or nearly completely inhibited contain HIV-1. Those isolates whose viral activity is unchanged or only reduced by a small amount, may be considered to not contain HIV-1. Such an isolate may then be treated with one or more of the other DP178 peptides of the invention, and subsequently be tested for its viral activity in order to determine the identify of the viral isolate. The DP107 and DP178 analogs of the invention may also be utilized in a diagnostic capacity specific to the type and subtype of virus or organism in which the specific

peptide sequence is found. A diagnostic procedure as described, above, for DP178, may be used in conjunction with the DP107/DP178 analog of interest.

5.5.1. SCREENING ASSAYS

As demonstrated in the Example presented in Section 8, below, DP107 and DP178 portions of the TM protein gp41 form non-covalent protein-protein interactions. As is also demonstrated, the maintenance of such interactions is necessary for normal viral infectivity. Thus, compounds which bind DP107, bind DP178, and/or act to disrupt normal DP107/DP178 protein-protein interactions may act as antifusogenic, antiviral or cellular modulatory agents. Described below are assays for the identification of such compounds. Note that, while, for ease and clarity of discussion, DP107 and DP178 peptides will be used as components of the assays described, but it is to be understood that any of the DP107 analog or DP178 analog peptides described, above, in Sections 5.1 through 5.3 may also be utilized as part of these screens for compounds.

Compounds which may be tested for an ability to bind DP107, DP178, and/or disrupt DP107/DP178 interactions, and which therefore, potentially represent antifusogenic, antiviral or intracellular modulatory compounds, include, but are not limited to, peptides made of D- and/or L-configuration amino acids (in, for example, the form of random peptide libraries; see Lam, K.S. et al., 1991, Nature 354:82-84), phosphopeptides (in, for example, the form of random or partially degenerate, directed phosphopeptide libraries; see, for example, Songyang, Z. et al., 1993, Cell 72:767-778), antibodies, and small organic or inorganic molecules. Synthetic compounds, natural products, and other sources of

potentially effective materials may be screened in a variety of ways, as described in this Section.

The compounds, antibodies, or other molecules identified may be tested, for example, for an ability to inhibit cell fusion or viral activity, utilizing, for example, assays such as those described, above, in Section 5.5.

Among the peptides which may be tested are soluble peptides comprising DP107 and/or DP178 domains, and peptides comprising DP107 and/or DP178 domains having one or more mutations within one or both of the domains, such as the M41-P peptide described, below, in the Example presented in Section 8, which contains a isoleucine to proline mutation within the DP178 sequence.

In one embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP107 peptide for a time sufficient to allow binding of the compound to the DP107 peptide;

(b) removing non-bound compounds; and

(c) determining the presence of the compound bound to the DP107 peptide,

thereby identifying an agent to be tested for antiviral ability.

In a second embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP178 peptide for a time sufficient to allow binding of the compound to the DP178 peptide;

(b) removing non-bound compounds; and

(c) determining the presence of the compound bound to the DP178 peptide, thereby identifying an agent to be tested for antiviral ability.

One method utilizing these types of approaches that may be pursued in the isolation of such DP107-binding or DP178-binding compounds is an assay which would include the attachment of either the DP107 or the DP178 peptide to a solid matrix, such as, for example, agarose or plastic beads, microtiter plate wells, petri dishes, or membranes composed of, for example, nylon or nitrocellulose. In such an assay system, either the DP107 or DP178 protein may be anchored onto a solid surface, and the compound, or test substance, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored component may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying.

Alternatively, an immobilized antibody, preferably a monoclonal antibody, specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

In order to conduct the assay, the labeled compound is added to the coated surface containing the anchored DP107 or DP178 peptide. After the reaction is complete, unreacted components are removed (e.g., by washing) under conditions such that any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the compound is pre-labeled, the detection of label immobilized on the surface indicates that

complexes were formed. Where the labeled component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the compound (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody).

Alternatively, such an assay can be conducted in a liquid phase, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for DP107 or DP178, whichever is appropriate for the given assay, or ab antibody specific for the compound, i.e., the test substance, in order to anchor any complexes formed in solution, and a labeled antibody specific for the other member of the complex to detect anchored complexes.

By utilizing procedures such as this, large numbers of types of molecules may be simultaneously screened for DP107 or DP178-binding capability, and thus potential antiviral activity.

Further, compounds may be screened for an ability to inhibit the formation of or, alternatively, disrupt DP107/DP178 complexes. Such compounds may then be tested for antifusogenic, antiviral or intercellular modulatory capability. For ease of description, DP107 and DP178 will be referred to as "binding partners." Compounds that disrupt such interactions may exhibit antiviral activity. Such compounds may include, but are not limited to molecules such as antibodies, peptides, and the like described above.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between the DP107 and DP178 peptides involves preparing a reaction mixture containing peptides under conditions and for a time sufficient to allow the two peptides to interact and bind, thus forming a complex.

In order to test a compound for disruptive activity, the reaction is conducted in the presence and absence of the test compound, i.e., the test compound may be initially included in the reaction mixture, or added at a time subsequent to the addition of one of the binding partners; controls are incubated without the test compound or with a placebo. The formation of any complexes between the binding partners is then detected. The formation of a complex in the control reaction, but not in the reaction mixture containing the test compound indicates that the compound interferes with the interaction of the DP107 and DP178 peptides.

The assay for compounds that interfere with the interaction of the binding partners can be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring one of the binding partners onto a solid phase and detecting complexes anchored on the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the binding partners, e.g., by competition, can be identified by conducting the reaction in the presence of the test substance; i.e., by adding the test substance to the reaction mixture prior to or simultaneously with the binding partners. On the other hand, test compounds that disrupt preformed complexes, e.g. compounds with higher binding constants that displace one of the binding partners from the complex, can be tested by adding the test compound to the reaction mixture after complexes have

been formed. The various formats are described briefly below.

In a heterogeneous assay system, one binding partner, e.g., either the DP107 or DP178 peptide, is anchored onto a solid surface, and its binding partner, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored species may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying. Alternatively, an immobilized antibody specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

In order to conduct the assay, the binding partner of the immobilized species is added to the coated surface with or without the test compound. After the reaction is complete, unreacted components are removed (e.g., by washing) and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the binding partner was pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the binding partner is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the binding partner (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which inhibit complex formation or which disrupt preformed complexes can be detected.

Alternatively, the reaction can be conducted in a liquid phase in the presence or absence of the test compound, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for one binding partner to anchor any complexes formed in solution, and a labeled antibody specific for the other binding partner to detect anchored complexes. Again, depending upon the order of addition of reactants to the liquid phase, test compounds which inhibit complex or which disrupt preformed complexes can be identified.

In an alternate embodiment of the invention, a homogeneous assay can be used. In this approach, a preformed complex of the DP107 and DP178 peptides is prepared in which one of the binding partners is labeled, but the signal generated by the label is quenched due to complex formation (see, e.g., U.S. Patent No. 4,109,496 by Rubenstein which utilizes this approach for immunoassays). The addition of a test substance that competes with and displaces one of the binding partners from the preformed complex will result in the generation of a signal above background. In this way, test substances which disrupt DP-107/ DP-178 protein-protein interaction can be identified.

In an alternative screening assay, test compounds may be assayed for the their ability to disrupt a DP178/DP107 interaction, as measured immunometrically using an antibody specifically reactive to a DP107/DP178 complex (i.e., an antibody that recognizes neither DP107 nor DP178 individually). Such an assay acts as a competition assay, and is based on techniques well known to those of skill in the art.

The above competition assay may be described, by way of example, and not by way of limitation, by using the DP178 and M41Δ178 peptides and by assaying test

compounds for the disruption of the complexes formed by these two peptides by immunometrically visualizing DP178/M41Δ178 complexes via the human recombinant Fab, Fab-d, as described, below, in the Example presented in Section 8. M41Δ178 is a maltose binding fusion protein containing a gp41 region having its DP178 domain deleted, and is described, below, in the Example presented in Section 8.

Utilizing such an assay, M41Δ178 may be immobilized onto solid supports such as microtiter wells. A series of dilutions of a test compound may then be added to each M41Δ178-containing well in the presence of a constant concentration of DP-178 peptide. After incubation, at, for example, room temperature for one hour, unbound DP-178 and test compound are removed from the wells and wells are then incubated with the DP178/M41Δ178-specific Fab-d antibody. After incubation and washing, unbound Fab-d is removed from the plates and bound Fab-d is quantitated. A no-inhibitor control should also be conducted. Test compounds showing an ability to disrupt DP178/M41Δ178 complex formation are identified by their concentration-dependent decrease in the level of Fab-d binding.

A variation of such an assay may be utilized to perform a rapid, high-throughput binding assay which is capable of directly measuring DP178 binding to M41Δ178 for the determination of binding constants of the ligand of inhibitory constants for competitors of DP178 binding.

Such an assay takes advantage of accepted radioligand and receptor binding principles. (See, for example, Yamamura, H.I. et al., 1985, "Neurotransmitter Receptor Binding", 2nd ed., Raven Press, NY.) As above, M41Δ178 is immobilized onto a solid support such as a microtiter well. DP178

binding to M41Δ178 is then quantitated by measuring the fraction of DP178 that is bound as ^{125}I-DP178 and calculating the total amount bound using a value for specific activity (dpm/μg peptide) determined for each labeled DP178 preparation. Specific binding to M41Δ178 is defined as the difference of the binding of the labeled DP178 preparation in the microtiter wells (totals) and the binding in identical wells containing, in addition, excess unlabeled DP178 (nonspecifics).

5.5 PHARMACEUTICAL FORMULATIONS, DOSAGES AND MODES OF ADMINISTRATION

The peptides of the invention may be administered using techniques well known to those in the art. Preferably, agents are formulated and administered systemically. Techniques for formulation and administration may be found in "Remington's Pharmaceutical Sciences", 18th ed., 1990, Mack Publishing Co., Easton, PA. Suitable routes may include oral, rectal, transmucosal, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as, intrathecal, direct intraventricular, intravenous, intraperitoneal, intranasal, or intraocular injections, just to name a few. For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks' solution, Ringer's solution, or physiological saline buffer. For such transmucosal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art.

In instances wherein intracellular administration of the peptides of the invention or other inhibitory

agents is preferred, techniques well known to those of ordinary skill in the art may be utilized. For example, such agents may be encapsulated into liposomes, then administered as described above. Liposomes are spherical lipid bilayers with aqueous interiors. All molecules present in an aqueous solution at the time of liposome formation are incorporated into the aqueous interior. The liposomal contents are both protected from the external microenvironment and, because liposomes fuse with cell membranes, are effectively delivered into the cell cytoplasm. Additionally, due to their hydrophobicity, when small molecules are to be administered, direct intracellular administration may be achieved.

Nucleotide sequences encoding the peptides of the invention which are to be intracellularly administered may be expressed in cells of interest, using techniques well known to those of skill in the art. For example, expression vectors derived from viruses such as retroviruses, vaccinia viruses, adeno-associated viruses, herpes viruses, or bovine papilloma viruses, may be used for delivery and expression of such nucleotide sequences into the targeted cell population. Methods for the construction of such vectors and expression constructs are well known. See, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Press, Cold Spring Harbor NY, and Ausubel et al., 1989, Current Protocols in Molecular Biology, Greene Publishing Associates and Wiley Interscience, NY.

With respect to HIV, peptides of the invention, particularly DP107 and DP178, may be used as therapeutics in the treatment of AIDS. In addition, the peptides may be used as prophylactic measures in previously uninfected individuals after acute exposure

to an HIV virus. Examples of such prophylactic use of the peptides may include, but are not limited to, prevention of virus transmission from mother to infant and other settings where the likelihood of HIV transmission exists, such as, for example, accidents in health care settings wherein workers are exposed to HIV-containing blood products. The successful use of such treatments do not rely upon the generation of a host immune response directed against such peptides.

Effective dosages of the peptides of the invention to be administered may be determined through procedures well known to those in the art which address such parameters as biological half-life, bioavailability, and toxicity. Given the data presented below in Section 6, DP178, for example, may prove efficacious in vivo at doses required to achieve circulating levels of about 1 to about 10 ng per ml of peptide.

A therapeutically effective dose refers to that amount of the compound sufficient to result in amelioration of symptoms or a prolongation of survival in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the LD_{50} (the dose lethal to 50% of the population) and the ED50 (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio LD_{50}/ED_{50}. Compounds which exhibit large therapeutic indices are preferred. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED50 with

little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For any compound used in the method of the invention, the therapeutically effective dose can be estimated initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range that includes the IC_{50} (e.g., the concentration of the test compound which achieves a half-maximal inhibition of the fusogenic event, such as a half-maximal inhibition of viral infection relative to the amount of the event in the absence of the test compound) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels in plasma may be measured, for example, by high performance liquid chromatography (HPLC).

The peptides of the invention may, further, serve the role of a prophylactic vaccine, wherein the host raises antibodies against the peptides of the invention, which then serve to neutralize HIV viruses by, for example, inhibiting further HIV infection.

Administration of the peptides of the invention as a prophylactic vaccine, therefore, would comprise administering to a host a concentration of peptides effective in raising an immune response which is sufficient to neutralize HIV, by, for example, inhibiting HIV ability to infect cells. The exact concentration will depend upon the specific peptide to be administered, but may be determined by using standard techniques for assaying the development of an immune response which are well known to those of ordinary skill in the art. The peptides to be used as vaccines are usually administered intramuscularly.

The peptides may be formulated with a suitable adjuvant in order to enhance the immunological

response. Such adjuvants may include, but are not limited to mineral gels such as aluminum hydroxide; surface active substances such as lysolecithin, pluronic polyols, polyanions; other peptides; oil emulsions; and potentially useful human adjuvants such as BCG and Corynebacterium parvum. Many methods may be used to introduce the vaccine formulations described here. These methods include but are not limited to oral, intradermal, intramuscular, intraperitoneal, intravenous, subcutaneous, and intranasal routes.

Alternatively, an effective concentration of polyclonal or monoclonal antibodies raised against the peptides of the invention may be administered to a host so that no uninfected cells become infected by HIV. The exact concentration of such antibodies will vary according to each specific antibody preparation, but may be determined using standard techniques well known to those of ordinary skill in the art. Administration of the antibodies may be accomplished using a variety of techniques, including, but not limited to those described in this section.

For all such treatments described above, the exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. (See e.g. Fingl et al., 1975, in "The Pharmacological Basis of Therapeutics", Ch. 1 p1).

It should be noted that the attending physician would know how to and when to terminate, interrupt, or adjust administration due to toxicity, or to organ dysfunctions. Conversely, the attending physician would also know to adjust treatment to higher levels if the clinical response were not adequate (precluding toxicity). The magnitude of an administrated dose in the management of the oncogenic disorder of interest

will vary with the severity of the condition to be treated and the route of administration. The dose and perhaps dose frequency, will also vary according to the age, body weight, and response of the individual patient. A program comparable to that discussed above may be used in veterinary medicine.

Use of pharmaceutically acceptable carriers to formulate the compounds herein disclosed for the practice of the invention into dosages suitable for systemic administration is within the scope of the invention. With proper choice of carrier and suitable manufacturing practice, the compositions of the present invention, in particular, those formulated as solutions, may be administered parenterally, such as by intravenous injection. The compounds can be formulated readily using pharmaceutically acceptable carriers well known in the art into dosages suitable for oral administration. Such carriers enable the compounds of the invention to be formulated as tablets, pills, capsules, liquids, gels, syrups, slurries, suspensions and the like, for oral ingestion by a patient to be treated.

Pharmaceutical compositions suitable for use in the present invention include compositions wherein the active ingredients are contained in an effective amount to achieve its intended purpose. Determination of the effective amounts is well within the capability of those skilled in the art, especially in light of the detailed disclosure provided herein.

In addition to the active ingredients, these pharmaceutical compositions may contain suitable pharmaceutically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. The preparations formulated

for oral administration may be in the form of tablets, dragees, capsules, or solutions.

The pharmaceutical compositions of the present invention may be manufactured in a manner that is itself known, e.g., by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes.

Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. Optionally, the suspension may also contain suitable stabilizers or agents which increase the solubility of the compounds to allow for the preparation of highly concentrated solutions.

Pharmaceutical preparations for oral use can be obtained by combining the active compounds with solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients are, in particular, fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth, methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be

added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate.

Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or dragee coatings for identification or to characterize different combinations of active compound doses.

Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added.

6. EXAMPLE: DP178 (SEQ ID:1) IS A POTENT INHIBITOR OF HIV-1 INFECTION

In this example, DP178 (SEQ ID:1) is shown to be a potent inhibitor of HIV-1 mediated CD-4$^+$ cell-cell fusion and infection by cell free virus. In the fusion assay, this peptide completely blocks virus induced syncytia formation at concentrations of from 1-10 ng/ml. In the infectivity assay the inhibitory concentration is somewhat higher, blocking infection at 90ng/ml. It is further shown that DP178 (SEQ ID:1) shows that the antiviral activity of DP178 (SEQ ID:1)

is highly specific for HIV-1. Additionally, a synthetic peptide, DP-185 (SEQ ID:3), representing a HIV-1-derived DP178 homolog is also found to block HIV-1-mediated syncytia formation.

6.1. MATERIALS AND METHODS

6.1.1. PEPTIDE SYNTHESIS

Peptides were synthesized using Fast Moc chemistry on an Applied Biosystems Model 431A peptide synthesizer. Generally, unless otherwise noted, the peptides contained amidated carboxy termini and acetylated amino termini. Amidated peptides were prepared using Rink resin (Advanced Chemtech) while peptides containing free carboxy termini were synthesized on Wang (p-alkoxy-benzyl-alcohol) resin (Bachem). First residues were double coupled to the appropriate resin and subsequent residues were single coupled. Each coupling step was followed by acetic anhydride capping. Peptides were cleaved from the resin by treatment with trifluoracetic acid (TFA) (10ml), H_2O (0.5ml), thioanisole (0.5ml), ethanedithiol (0.25ml), and crystalline phenol (0.75g). Purification was carried out by reverse phase HPLC. Approximately 50mg samples of crude peptide were chromatographed on a Waters Delta Pak C18 column (19mm x 30cm, 15μ spherical) with a linear gradient; H_2O/acetonitrile 0.1% TFA. Lyophilized peptides were stored desiccated and peptide solutions were made in water at about 1mg/ml. Electrospray mass spectrometry yielded the following results: DP178 (SEQ ID:1):4491.87 (calculated 4491.94); DP-180 (SEQ ID:2):4491.45 (calculated 4491.94); DP-185 (SEQ ID:3):not done (calculated 4546.97).

6.1.2. VIRUS

The HIV-1_{LAI} virus was obtained from R. Gallo (Popovic, M. et al., 1984, Science 224:497-508) and propagated in CEM cells cultured in RPMI 1640 containing 10% fetal calf serum. Supernatant from the infected CEM cells was passed through a 0.2μm filter and the infectious titer estimated in a microinfectivity assay using the AA5 cell line to support virus replication. For this purpose, 25μl of serial diluted virus was added to 75μl AA5 cells at a concentration of 2 x 10^5/ml in a 96-well microtitre plate. Each virus dilution was tested in triplicate. Cells were cultured for eight days by addition of fresh medium every other day. On day 8 post infection, supernatant samples were tested for virus replication as evidenced by reverse transcriptase activity released to the supernatant. The $TCID_{50}$ was calculated according to the Reed and Muench formula (Reed, L.J. et al., 1938, Am. J. Hyg. 27:493-497). The titer of the HIV-1_{LAI} and HIV-1_{MN} stocks used for these studies, as measured on the AA5 cell line, was approximately 1.4 x 10^6 and 3.8 x 10^4 $TCID_{50}$/ml, respectively.

6.1.3. CELL FUSION ASSAY

Approximately 7 x 10^4 Molt cells were incubated with 1 x 10^4 CEM cells chronically infected with the HIV-1_{LAI} virus in 96-well plates (one-half area cluster plates; Costar, Cambridge, MA) in a final volume of 100μl culture medium as previously described (Matthews, T.J. et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5428). Peptide inhibitors were added in a volume of 10μl and the cell mixtures were incubated for 24 hr. at 37°C. At that time, multinucleated giant cells were estimated by microscopic examination

at a 40x magnification which allowed visualization of the entire well in a single field.

6.1.4. CELL FREE VIRUS INFECTION ASSAY

Synthetic peptides were incubated at 37°C with either 247 $TCID_{50}$ (for experiment depicted in FIG. 2), or 62 $TCID_{50}$ (for experiment depicted in FIG.3) units of HIV-1_{LAI} virus or 25 $TCID_{50}$ units of HIV-2_{NIHZ} and CEM $CD4^+$ cells at peptide concentrations of 0, 0.04, 0.4, 4.0, and 40μg/ml for 7 days. The resulting reverse transcriptase (RT) activity in counts per minute was determined using the assay described, below, in Section 6.1.5. See, Reed, L.J. et al., 1938, Am. J. Hyg. 27: 493-497 for an explanation of $TCID_{50}$ calculations.

6.1.5. REVERSE TRANSCRIPTASE ASSAY

The micro-reverse transcriptase (RT) assay was adapted from Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). Supernatants from virus/cell cultures are adjusted to 1% Triton-X100. A 10μl sample of supernatant was added to 50μl of RT cocktail in a 96-well U-bottom microtitre plate and the samples incubated at 37°C for 90 min. The RT cocktail contained 75mM KCl, 2mM dithiothreitol, 5mM $MgCl_2$, 5μg/ml poly A (Pharmacia, cat. No. 27-4110-01), 0.25 units/ml oligo dT (Pharmacia, cat. No. 27-7858-01), 0.05% NP40, 50mM Tris-HCl, pH 7.8, 0.5μM non-radioactive dTTP, and 10μCi/ml ^{32}P-dTTP (Amersham, cat. No. PB.10167).

After the incubation period, 40μl of reaction mixture was applied to a Schleicher and Schuell (S+S) NA45 membrane (or DE81 paper) saturated in 2 x SSC buffer (0.3M NaCl and 0.003M sodium citrate) held in a S+S Minifold over one sheet of GB003 (S+S) filter

paper, with partial vacuum applied. Each well of the minifold was washed four times with 200µl 2xSSC, under full vacuum. The membrane was removed from the minifold and washed 2 more times in a pyrex dish with an excess of 2xSSC. Finally, the membrane was drained on absorbent paper, placed on Whatman #3 paper, covered with Saran wrap, and exposed to film overnight at -70°C.

6.2. RESULTS

6.2.1. PEPTIDE INHIBITION OF INFECTED CELL-INDUCED SYNCYTIA FORMATION

The initial screen for antiviral activity assayed peptides' ability to block syncytium formation induced by overnight co-cultivation of uninfected Molt4 cells with chronically HIV-1 infected CEM cells. The results of several such experiments are presented herein. In the first of these experiments, serial DP178 (SEQ ID:1) peptide concentrations between 10µg/ml and 12.5ng/ml were tested for blockade of the cell fusion process. For these experiments, CEM cells chronically infected with either HIV-1_{LAI}, HIV-1_{MN}, HIV-1_{RF}, or HIV-1_{SF2} virus were cocultivated overnight with uninfected Molt 4 cells. The results (FIG. 4) show that DP178 (SEQ ID:1) afforded complete protection against each of the HIV-1 isolates down to the lowest concentration of DP178 (SEQ ID:1) used. For HIV_{LAI} inhibition, the lowest concentration tested was 12.5ng/ml; for all other HIV-1 viruses, the lowest concentration of DP178 (SEQ ID:1) used in this study was 100ng/ml. A second peptide, DP-180 (SEQ ID:2), containing the same amino acid residues as DP178 (SEQ ID:1) but arranged in a random order exhibited no evidence of anti-fusogenic activity even at the high concentration of 40µg/ml (FIG. 4). These observations indicate that the inhibitory effect of DP178 (SEQ

ID:1) is primary sequence-specific and not related to non-specific peptide/protein interactions. The actual endpoint (i.e., the lowest effective inhibitory concentration) of DP178 inhibitory action is within the range of 1-10 ng/ml.

The next series of experiments involved the preparation and testing of a DP178 (SEQ ID:1) homolog for its ability to inhibit HIV-1-induced syncytia formation. As shown in FIG. 1, the sequence of DP-185 (SEQ ID:3) is slightly different from DP178 (SEQ ID:1) in that its primary sequence is taken from the HIV-1_{SF2} isolate and contains several amino acid differences relative to DP178 (SEQ ID:1) near the N terminus. As shown in FIG. 4, DP-185 (SEQ ID:3), exhibits inhibitory activity even at 312.5ng/ml, the lowest concentration tested.

The next series of experiments involved a comparison of DP178 (SEQ ID:1) HIV-1 and HIV-2 inhibitory activity. As shown in FIG. 5, DP178 (SEQ ID:1) blocked HIV-1-mediated syncytia formation at peptide concentrations below 1ng/ml. DP178 (SEQ ID:1) failed, however, to block HIV-2 mediated syncytia formation at concentrations as high as 10μg/ml. This striking 4 log selectivity of DP178 (SEQ ID:1) as an inhibitor of HIV-1-mediated cell fusion demonstrates an unexpected HIV-1 specificity in the action of DP178 (SEQ ID:1). DP178 (SEQ ID:1) inhibition of HIV-1-mediated cell fusion, but the peptide's inability to inhibit HIV-2 medicated cell fusion in the same cell type at the concentrations tested provides further evidence for the high degree of selectivity associated with the antiviral action of DP178 (SEQ ID:1).

6.2.2. PEPTIDE INHIBITION OF INFECTION BY CELL-FREE VIRUS

DP178 (SEQ ID:1) was next tested for its ability to block CD-4$^+$ CEM cell infection by cell free HIV-1 virus. The results, shown in FIG. 2, are from an experiment in which DP178 (SEQ ID:1) was assayed for its ability to block infection of CEM cells by an HIV-1_{LAI} isolate. Included in the experiment were three control peptides, DP-116 (SEQ ID:9), DP-125 (SEQ ID:8), and DP-118 (SEQ ID:10). DP-116 (SEQ ID:9) represents a peptide previously shown to be inactive using this assay, and DP-125 (SEQ ID:8; Wild, C. et al., 1992, Proc. Natl. Acad, Sci. USA 89:10,537) and DP-118 (SEQ ID:10) are peptides which have previously been shown to be active in this assay. Each concentration (0, 0.04, 0.4, 4, and 40μg/ml) of peptide was incubated with 247 $TCID_{50}$ units of HIV-1_{LAI} virus and CEM cells. After 7 days of culture, cell-free supernatant was tested for the presence of RT activity as a measure of successful infection. The results, shown in FIG. 2, demonstrate that DP178 (SEQ ID:1) inhibited the de novo infection process mediated by the HIV-1 viral isolate at concentrations as low as 90ng/ml (IC50=90ng/ml). In contrast, the two positive control peptides, DP-125 (SEQ: ID:8) and DP-118 (SEQ ID:10), had over 60-fold higher IC50 concentrations of approximately 5μg/ml.

In a separate experiment, the HIV-1 and HIV-2 inhibitory action of DP178 (SEQ ID:1) was tested with CEM cells and either HIV-1_{LAI} or HIV-2_{NIHZ}. 62 $TCID_{50}$ HIV-1_{LAI} or 25 $GCID_{50}$ HIV-2_{NIHZ} were used in these experiments, and were incubated for 7 days. As may be seen in FIG. 3, DP178 (SEQ ID:1) inhibited HIV-1 infection with an IC50 of about 31ng/ml. In contrast, DP178 (SEQ ID:1) exhibited a much higher IC50 for HIV-2_{NIHZ}, thus making DP178 (SEQ ID:1) two logs more potent

as a HIV-1 inhibitor than a HIV-2 inhibitor. This finding is consistent with the results of the fusion inhibition assays described, above, in Section 6.2.1, and further supports a significant level of selectivity (i.e., for HIV-1 over HIV-2).

7. EXAMPLE: THE HIV-1 INHIBITOR, DP178 (SEQ ID:1) IS NON-CYTOTOXIC

In this Example, the 36 amino acid synthetic peptide inhibitor DP178 (SEQ ID:1) is shown to be non-cytotoxic to cells in culture, even at the highest peptide concentrations (40μg/ml) tested.

7.1. MATERIALS AND METHODS

Cell proliferation and toxicity assay: Approximately 3.8×10^5 CEM cells for each peptide concentration were incubated for 3 days at 37°C in T25 flasks. Peptides tested were DP178 (SEQ ID:1) and DP-116 (SEQ ID:9), as described in FIG. 1. Peptides were synthesized as described, above, in Section 6.1. The concentrations of each peptide used were 0, 2.5, 10, and 40μg/ml. Cell counts were taken at incubation times of 0, 24, 48, and 72 hours.

7.2. RESULTS

Whether the potent HIV-1 inhibitor DP178 (SEQ ID:1) exhibited any cytotoxic effects was assessed by assaying the peptide's effects on the proliferation and viability of cells in culture. CEM cells were incubated in the presence of varying concentrations of DP178 (SEQ ID:1), and DP-116 (SEQ ID:9), a peptide previously shown to be ineffective as a HIV inhibitor (Wild, C. et al., 1992, Proc. Natl. Acad. Sci. USA 89:10,537-10,541). Additionally, cells were incubated in the absence of either peptide.

The results of the cytotoxicity study demonstrate that DP178 (SEQ ID:1) exhibits no cytotoxic effects on cells in culture. As can be seen, below, in Table XXIV, even the proliferation and viability characteristics of cells cultured for 3 days in the presence of the highest concentration of DP178 (SEQ ID:1) tested (40μg/ml) do not significantly differ from the DP-116 (SEQ ID:9) or the no-peptide controls. The cell proliferation data is also represented in graphic form in FIG. 6. As was demonstrated in the Working Example presented above in Section 6, DP178 (SEQ ID:1) completely inhibits HIV-1 mediated syncytia formation at peptide concentrations between 1 and 10ng/ml, and completely inhibits cell-free viral infection at concentrations of at least 90ng/ml. Thus, this study demonstrates that even at peptide concentrations greater than 3 log higher than the HIV inhibitory dose, DP178 (SEQ ID:1) exhibits no cytotoxic effects.

TABLE XXIV

Peptide	Peptide Concentration µg/ml	% Viability at time (hours) 0	24	48	72
DP178 (SEQ ID:1)	40	98	97	95	97
	10	98	97	98	98
	2.5	98	93	96	96
DP116 (SEQ ID:9)	40	98	95	98	97
	10	98	95	93	98
	2.5	98	96	98	99
No Peptide	0	98	97	99	98

8. EXAMPLE: THE INTERACTION OF DP178 AND DP107

Soluble recombinant forms of gp41 used in the example described below provide evidence that the DP178 peptide associates with a distal site on gp41 whose interactive structure is influenced by the DP107 leucine zipper motif. A single mutation disrupting the coiled-coil structure of the leucine zipper domain transformed the soluble recombinant gp41 protein from an inactive to an active inhibitor of HIV-1 fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107, determinant. The results also indicate that the anti-HIV activity of various gp41 derivatives (peptides and recombinant proteins) may be

due to their ability to form complexes with viral gp41 and interfere with its fusogenic process.

8.1. MATERIALS AND METHODS

8.1.1. CONSTRUCTION OF FUSION PROTEINS AND GP41 MUTANTS

Construction of fusion proteins and mutants shown in FIG. 7 was accomplished as follows: the DNA sequence corresponding to the extracellular domain of gp41 (540-686) was cloned into the Xmn I site of the expression vector pMal-p2 (New England Biolab) to give M41. The gp41 sequence was amplified from pgtat (Malim et al., 1988, Nature 355: 181-183) by using polymerase chain reaction (PCR) with upstream primer 5'-ATGACGCTGACGGTACAGGCC-3' (primer A) and downstream primer 5'-TGACTAAGCTTAATACCACAGCCAATTTGTTAT-3' (primer B). M41-P was constructed by using the T7-Gen *in vitro* mutagenesis kit from United States Biochemicals (USB) following the supplier's instructions. The mutagenic primer (5'-GGAGCTGCTTGGGGCCCCAGAC-3') introduces an Ile to Pro mutation in M41 at position 578. M41Δ107, from which the DP-107 region has been deleted, was made using a deletion mutagenic primer 5'-CCAAATCCCCAGGAGCTGCTCGAGCTGCACTATACCAGAC-3' (primer C) following the USB T7-Gen mutagenesis protocol. M41Δ178, from which the DP-178 region has been deleted, was made by cloning the DNA fragment corresponding to gp41 amino acids 540-642 into the Xmn I site of pMal-p2. Primer A and 5'-ATAGCTTCTAGATTAATTGTTAATTTCTCTGTCCC-3' (primer D) were used in the PCR with the template pgtat to generate the inserted DNA fragments. M41-P was used as the template with primer A and D in PCR to generate M41-PΔ178. All inserted sequences and mutated residues

were checked by restriction enzyme analysis and confirmed by DNA sequencing.

8.1.2. PURIFICATION AND CHARACTERIZATION OF FUSION PROTEINS

The fusion proteins were purified according to the protocol described in the manufacturer's brochure of protein fusion and purification systems from New England Biolabs (NEB). Fusion proteins (10 ng) were analyzed by electrophoresis on 8% SDS polyacrylamide gels. Western blotting analysis was performed as described by Sambrook et al., 1989, Molecular Cloning: A Laboratory Manual, 2d Ed, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, Ch. 18, pp. 64-75. An HIV-1 positive serum diluted 1000-fold, or a human Fab derived from repertoire cloning was used to react with the fusion proteins. The second antibody was HRP-conjugated goat antihuman Fab. An ECL Western blotting detection system (Amersham) was used to detect the bound antibody. A detailed protocol for this detection system was provided by the manufacturer. Rainbow molecular weight markers (Amersham) were used to estimate the size of fusion proteins.

8.1.3. CELL FUSION ASSAYS FOR ANTI-HIV ACTIVITY

Cell fusion assays were performed as previously described (Matthews et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5481). CEM cells (7 X 10^4) were incubated with HIV-1_{IIIB} chronically infected CEM cells (10^4) in 96-well flat-bottomed half-area plates (Costar) in 100 μl culture medium. Peptide and fusion proteins at various concentrations in 10 μl culture medium were incubated with the cell mixtures at 37°C for 24 hours. Multinucleated syncytia were estimated with microscopic examination. Both M41 and M41-P did

not show cytotoxicity at the concentrations tested and shown in FIG. 8.

Inhibition of HIV-1 induced cell-cell fusion activity was carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41-PΔ178 as indicated in FIG. 9. There was no observable syncytia in the presence of 10 nM DP178. No peptide or fusion protein was added in the control samples.

8.1.4. ELISA ANALYSIS OF DP178 BINDING TO THE LEUCINE ZIPPER MOTIF OF GP41

The amino acid sequence of DP178 used is: YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF. For enzyme linked immunoassay (ELISA), M41Δ178 or M41-PΔ178 (5 μg/ml) in 0.1M $NaHCO_3$, pH 8.6, were coated on 96 wells Linbro ELISA plates (Flow Lab, Inc.) overnight. Each well was washed three times with distilled water then blocked with 3% bovine serum albumin (BSA) for 2 hours. After blocking, peptides with 0.5% BSA in TBST (40 mM Tris-HCl pH7.5, 150 mM NaCl, 0.05% Tween 20) were added to the ELISA plates and incubated at room temperature for 1 hour. After washing three times with TBST, Fab-d was added at a concentration of 10 ng/ml with 0.5% BSA in TBST. The plates were washed three times with TBST after incubation at room temperature for 1 hour. Horse radish peroxidase (HRP) conjugated goat antihuman Fab antiserum at a 2000 fold dilution in TBST with 0.5% BSA was added to each well and incubated at room temperature for 45 minutes. The plates were then washed four times with TBST. The peroxidase substrate o-phenylene diamine (2.5 mg/ml) and 0.15% H_2O_2 were added to develop the color. The reaction was stopped with an equal volume of 4.5 N H_2SO_4 after incubation at room temperature for 10 minutes. The optical density of the stopped reaction mixture was measured with a micro plate reader

(Molecular Design) at 490 nm. Results are shown in FIG. 10.

8.2. RESULTS

8.2.1. THE EXPRESSION AND CHARACTERIZATION OF THE ECTODOMAIN OF gp41

As a step toward understanding the roles of the two helical regions in gp41 structure and function, the ectodomain of gp41 was expressed as a maltose binding fusion protein (M41) (FIG. 7). The fusogenic peptide sequence at the N-terminal of gp41 was omitted from this recombinant protein and its derivatives to improve solubility. The maltose binding protein facilitated purification of the fusion proteins under relatively mild, non-denaturing conditions. Because the M41 soluble recombinant gp41 was not glycosylated, lacked several regions of the transmembrane protein (i.e., the fusion peptide, the membrane spanning, and the cytoplasmic domains), and was expressed in the absence of gp120, it was not expected to precisely reflect the structure of native gp41 on HIV-1 virions. Nevertheless, purified M41 folded in a manner that preserved certain discontinuous epitopes as evidenced by reactivity with human monoclonal antibodies, 98-6, 126-6, and 50-69, previously shown to bind conformational epitopes on native gp41 expressed in eukaryotic cells (Xu et al., 1991, J. Virol. 65: 4832-4838; Chen, 1994, J. Virol. 68:2002-2010). Thus, at least certain regions of native gp41 defined by these antibodies appear to be reproduced in the recombinant fusion protein M41. Furthermore, M41 reacted with a human recombinant Fab (Fab-d) that recognizes a conformational epitope on gp41 and binds HIV-1 virions as well as HIV-1 infected cells but not uninfected cells as analyzed by FACS. Deletion of either helix motif, i.e., DP107 or DP178, of the M41 fusion protein

eliminated reactivity with Fab-d. These results indicate that both helical regions, separated by 60 amino acids in the primary sequence, are required to maintain the Fab-d epitope.

8.2.2. ANTI-HIV ACTIVITY OF THE RECOMBINANT ECTODOMAIN OF GP41

The wild type M41 fusion protein was tested for anti-HIV-1 activity. As explained, supra, synthetic peptides corresponding to the leucine zipper (DP107) and the C-terminal putative helix (DP178) show potent anti-HIV activity. Despite inclusion of both these regions, the recombinant M41 protein did not affect HIV-1 induced membrane fusion at concentrations as high as 50 μM (Table XXV, below).

TABLE XXV

DISRUPTION OF THE LEUCINE ZIPPER OF GP41 FREES THE ANTI-HIV MOTIF

	DP107	DP178	M41	M41-P	M41-PΔ178
Cell fusion (IC_{90})	1 μM	1 nM	>50 μM	83 nM	>50 μM
Fab-D binding (k_D)	-	-	$3.5x10^{-9}$	$2.5x10^{-8}$	-
HIV infectivity (IC_{90})	1 μM	80 nM	>16 μM	66 nM	>8 μM

1 The affinity constants of Fab-d binding to the fusion proteins were determined using a protocol described by B. Friguet et al., 1985, J. Immunol. Method. 77:305-319.

- = No detectable binding of Fab-d to the fusion proteins.

Antiviral Infectivity Assays. 20 μl of serially diluted virus stock was incubated for 60 minutes at ambient temperature with 20 μl of the indicated

concentration of purified recombinant fusion protein in RPMI 1640 containing 10% fetal bovine serum and antibiotics in a 96-well microtiter plate. 20 μl of CEM4 cells at 6 x 10^5 cells/ml were added to each well, and cultures were incubated at 37°C in a humidified CO_2 incubator. Cells were cultured for 9 days by the addition of fresh medium every 2 to 3 days. On days 5, 7, and 9 postinfection, supernatant samples were assayed for reverse transcriptase (RT) activity, as described below, to monitor viral replication. The 50% tissue culture infectious dose ($TCID_{50}$) was calculated for each condition according to the formula of Reed & Muench, 1937, Am. J. Hyg. 27:493-497. RT activity was determined by a modification of the published methods of Goff et al., 1981, J. Virol. 38:239-248 and Willey et al., 1988, J. Virol. 62:139-147 as described in Chen et al., 1993, AIDS Res. Human Retroviruses 9:1079-1086.

Surprisingly, a single amino acid substitution, proline in place of isoleucine in the middle of the leucine zipper motif, yielded a fusion protein (M41-P) which did exhibit antiviral activity (Table XXV and Fig. 8). As seen in Table XXV, M41-P blocked syncytia formation by 90% at approximately 85 nM and neutralized HIV-1_{MB} infection by 90% at approximately 70 nM concentrations. The anti-HIV-1 activity of M41-P appeared to be mediated by the C-terminal helical sequence since deletion of that region from M41-P yielded an inactive fusion protein, M41-PΔ178 (Table XXV). This interpretation was reinforced by experiments demonstrating that a truncated fusion protein lacking the DP178 sequence, M41Δ178, abrogated the potent anti-fusion activity of the DP178 peptide in a concentration-dependent manner (FIG. 9). The same truncated fusion protein containing the proline mutation disrupting the leucine zipper, M41-PΔ178, was not active in similar competition experiments (FIG. 9). The results indicate that the DP178 peptide associates with a second site on gp41 whose interactive structure is dependent on a wild type leucine zipper sequence. A similar interaction may occur within the wild type fusion protein, M41, and act to form an intramolecular clasp which sequesters

the DP178 region, making it unavailable for anti-viral activity.

A specific association between these two domains is also indicated by other human monoclonal Fab-d studies. For example, Fab-d failed to bind either the DP178 peptide or the fusion protein M41Δ178, but its epitope was reconstituted by simply mixing these two reagents together (FIG. 10). Again, the proline mutation in the leucine zipper domain of the fusion protein, M41-PΔ178, failed to reconstitute the epitope in similar mixing experiments.

9. EXAMPLE: METHOD FOR COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES

A number of known coiled-coil sequences have been well described in the literature and contain heptad repeat positioning for each amino acid. Coiled-coil nomenclature labels each of seven amino acids of a heptad repeat A through G, with amino acids A and D tending to be hydrophobic positions. Amino acids E and G tend to be charged. These four positions (A, D, E, and G) form the amphipathic backbone structure of a monomeric alpha-helix. The backbones of two or more amphipathic helices interact with each other to form di-, tri-, tetrameric, etc., coiled-coil structures. In order to begin to design computer search motifs, a series of well characterized coiled coils were chosen including yeast transcription factor GCN4, Influenza Virus hemagglutinin loop 36, and human proto-oncogenes c-Myc, c-Fos, and c-Jun. For each peptide sequence, a strict homology for the A and D positions, and a list of the amino acids which could be excluded for the B, C, E, F, and G positions (because they are not observed in these positions) was determined. Motifs were tailored to the DP107 and DP178 sequences by

deducing the most likely possibilities for heptad positioning of the amino acids of HIV-1 Bru DP-107, which is known to have coiled-coil structure, and HIV-1 Bru DP178, which is still structurally undefined. The analysis of each of the sequences is contained in FIG. 12. For example, the motif for GCN4 was designed as follows:

1. The only amino acids (using standard single letter amino acid codes) found in the A or D positions of GCN4 were [LMNV].
2. All amino acids were found at B, C, E, F, and G positions except {CFGIMPTW}.
3. The PESEARCH motif would, therefore, be written as follows:

[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)

Translating or reading the motif: "at the first A position either L, M, N, or V must occur; at positions B and C (the next two positions) accept everything except C, F, G, I, M, P, T, or W; at the D position either L, M, N, or V must occur; at positions E, F, and G (the next 3 positions) accept everything except C, F, G, I, M, P, T, or W." This statement is contained four times in a 28-mer motif and five times in a 35-mer motif. The basic motif key then would be: [LMNV]-{CFGIMPTW}. The motif keys for the remaining well described coiled-coil sequences are summarized in FIG. 12.

The motif design for DP107 and DP178 was slightly different than the 28-mer model sequences described above due to the fact that heptad repeat positions are not defined and the peptides are both longer than 28 residues. FIG. 13 illustrates several possible

sequence alignments for both DP107 and DP178 and also includes motif designs based on 28-mer, 35-mer, and full-length peptides. Notice that only slight differences occur in the motifs as the peptides are lengthened. Generally, lengthening the base peptide results in a less stringent motif. This is very useful in broadening the possibilities for identifying DP107-or DP-178-like primary amino acid sequences referred to in this document as "hits".

In addition to making highly specific motifs for each type peptide sequence to be searched, it is also possible to make "hybrid" motifs. These motifs are made by "crossing" two or more very stringent motifs to make a new search algorithm which will find not only both "parent" motif sequences but also any peptide sequences which have similarities to one, the other, or both "parents". For example, in FIG. 14 the "parent" sequence of GCN4 is crossed with each of the possible "parent" motifs of DP-107. Now the hybrid motif must contain all of the amino acids found in the A and D positions of both parents, and exclude all of the amino acids not found in either parent at the other positions. The resulting hybrid from crossing GCN4 or [LMNV]{CFGIMPTW} and DP107 (28-mer with the first L in the D position) or [ILQT]{CDFIMPST}, is [ILMNQTV]{CFIMPT}. Notice that now only two basic hybrid motifs exist which cover both framing possibilities, as well as all peptide lengths of the parent DP-107 molecule. FIG. 15 represents the "hybridizations" of GCN4 with DP-178. FIG. 16 represents the "hybridizations" of DP107 and DP178. It is important to keep in mind that the represented motifs, both parent and hybrid, are motif keys and not the depiction of the full-length motif needed to actually do the computer search.

Hybridizations can be performed on any combination of two or more motifs. FIG. 17 summarizes several three-motif hybridizations including GCN4, DP107 (both frames), and DP178 (also both frames). Notice that the resulting motifs are now becoming much more similar to each other. In fact, the first and third hybrid motifs are actually subsets of the second and fourth hybrid motifs respectively. This means that the first and third hybrid motifs are slightly more stringent than the second and fourth. It should also be noted that with only minor changes in these four motifs, or by hybridizing them, a single motif could be obtained which would find all of the sequences. However, it should be remembered that stringency is also reduced. Finally, the most broad-spectrum and least-stringent hybrid motif is described in FIG. 18 which summarizes the hybridization of GCN4, DP107 (both frames), DP178 (both frames), c-Fos, c-Jun, c-Myc, and Flu loop 36.

A special set of motifs was designed based on the fact that DP-178 is located only approximately ten amino acids upstream of the transmembrane spanning region of gp41 and just C-terminal to a proline which separates DP107 and DP178. It has been postulated that DP178 may be an amphipathic helix when membrane associated, and that the proline might aid in the initiation of the helix formation. The same arrangement was observed in Respiratory Syncytial Virus; however, the DP178-like region in this virus also had a leucine zipper just C-terminal to the proline. Therefore, N-terminal proline-leucine zipper motifs were designed to analyze whether any other viruses might contain this same pattern. The motifs are summarized in FIG. 19.

The PC/Gene protein database contains 5879 viral amino acid sequences (library file PVIRUSES; CD-ROM

release 11.0). Of these, 1092 are viral enveloped or glycoprotein sequences (library file PVIRUSE1). Tables V through XIV contain lists of protein sequence names and motif hit locations for all the motifs searched.

10. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107 AND DP178-LIKE SEQUENCES IN HUMAN IMMUNODEFICIENCY VIRUS

FIG. 20 represents search results for HIV-1 BRU isolate gp41 (PC/Gene protein sequence PENV_HV1BR). Notice that the hybrid motif which crosses DP-107 and DP-178 (named 107x178x4; the same motif as found in FIG. 16 found three hits including amino acids 550-599, 636-688, and 796-823. These areas include DP-107 plus eight N-terminal and four C-terminal amino acids; DP178 plus seven N-terminal and ten C-terminal amino acids; and an area inside the transmembrane region (cytoplasmic). FIG. 20 also contains the results obtained from searching with the motif named ALLMOTI5, for which the key is found in FIG. 17 ({CDGHP}{CFP}x5). This motif also found three hits including DP107 (amino acids 510-599), DP178 (615-717), and a cytoplasmic region (772-841). These hits overlap the hits found by the motif 107x178x4 with considerable additional sequences on both the amino and carboxy termini. This is not surprising in that 107x178x4 is a subset of the ALLMOTI5 hybrid motif. Importantly, even though the stringency of ALLMOTI5 is considerably less than 107x178x4, it still selectively identifies the DP107 and DP178 regions of gp41 shown to contain sequences for inhibitory peptides of HIV-1. The results of these two motif searches are summarized in Table V under the PC/Gene protein sequence name PENV HV1BR. The proline-leucine zipper motifs also gave several hits in HIV-1 BRU including 503-525 which is

at the very C-terminus of gp120, just upstream of the cleavage site (P7LZIPC and P12LZIPC); and 735-768 in the cytoplasmic domain of gp41 (P23LZIPC). These results are found in Tables VIII, IX, and X under the same sequence name as mentioned above. Notice that the only area of HIV-1 BRU which is predicted by the Lupas algorithm to contain a coiled-coil region, is from amino acids 635-670. This begins eight amino acids N-terminal to the start and ends eight amino acids N-terminal to the end of DP178. DP107, despite the fact that it is a known coiled coil, is not predicted to contain a coiled-coil region using the Lupas method.

11. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN RESPIRATORY SYNCYTIAL VIRUS

FIG. 21 represents search results for Human Respiratory Syncytial Virus (RSV; Strain A2) fusion glycoprotein F1 (PC/Gene protein sequence name PVGLF_HRSVA). Motif 107x178x4 finds three hits including amino acids 152-202, 213-243, and 488-515. The arrangement of these hits is similar to what is found in HIV-1 except that the motif finds two regions with similarities to DP-178, one just downstream of what would be called the DP107 region or amino acids 213-243, and one just upstream of the transmembrane region (also similar to DP178) or amino acids 488-515. Motif ALLMOTI5 also finds three areas including amino acids 116-202, 267-302, and 506-549. The proline-leucine zipper motifs also gave several hits including amino acids 205-221 and 265-287 (P1LZIPC 265-280, P12LZIPC), and 484-513 (P7LZIPC and P12LZIPC 484-506, P23LZIPC). Notice that the PLZIP motifs also identify regions which share location similarities with DP-178 of HIV-1.

12. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN SIMIAN IMMUNODEFICIENCY VIRUS

Motif hits for Simian immunodeficiency Virus gp41 (AGM3 isolate; PC/Gene protein sequence name PENV_SIVAG) are shown in FIG. 22. Motif 107x178x4 finds three hits including amino acids 566-593, 597-624, and 703-730. The first two hits only have three amino acids between them and could probably be combined into one hit from 566-624 which would represent a DP107-like hit. Amino acids 703 to 730 would then represent a DP178-like hit. ALLMOTI5 also finds three hits including amino acids 556-628 (DP107-like), 651-699 (DP178-like), and 808-852 which represents the transmembrane spanning region. SIV also has one region from 655-692 with a high propensity to form a coiled coil as predicted by the Lupas algorithm. Both 107x178x4 and ALLMOTI5 motifs find the same region. SIV does not have any PLZIP motif hits in gp41.

The identification of DP178/DP107 analogs for a second SIV isolate (MM251) is demonstrated in the Example presented, below, in Section 19.

13. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178 LIKE SEQUENCES IN CANINE DISTEMPER VIRUS

Canine Distemper Virus (strain Onderstepoort) fusion glycoprotein F1 (PC/Gene Protein sequence name PVGLF_CDVO) has regions similar to Human RSV which are predicted to be DP107-like and DP178-like (FIG. 23). Motif 107x178x4 highlights one area just C-terminal to the fusion peptide at amino acids 252-293. Amino acids 252-286 are also predicted to be coiled coil using the Lupas algorithm. Almost 100 amino acids C-terminal to the first region is a DP178-like area at residues 340-367. ALLMOTI5 highlights three areas of

interest including: amino acids 228-297, which completely overlaps both the Lupas prediction and the DP107-like 107x178x4 hit; residues 340-381, which overlaps the second 107x178x4 hit; and amino acids 568-602, which is DP178-like in that it is located just N-terminal to the transmembrane region. It also overlaps another region (residues 570-602) predicted by the Lupas method to have a high propensity to form a coiled coil. Several PLZIP motifs successfully identified areas of interest including P6 and P12LZIPC which highlight residues 336-357 and 336-361 respectively; P1 and P12LZIPC which find residues 398-414; and P12 and P23LZIPC which find residues 562-589 and 562-592 respectively.

14. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN NEWCASTLE DISEASE VIRUS

FIG. 24 shows the motif hits found in Newcastle Disease Virus (strain Australia-Victoria/32; PC Gene protein sequence name PVGLF_NDVA). Motif 107x178x4 finds two areas including a DP107-like hit at amino acids 151-178 and a DP178-like hit at residues 426-512. ALLMOTI5 finds three areas including residues 117-182, 231-272, and 426-512. The hits from 426-512 include a region which is predicted by the Lupas method to have a high coiled-coil propensity (460-503). The PLZIP motifs identify only one region of interest at amino acids 273-289 (P1 and 12LZIPC).

15. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN PARAINFLUENZA VIRUS

Both motifs 107x178x4 and ALLMOTI5 exhibit DP107-like hits in the same region, 115-182 and 117-182 respectively, of Human Parainfluenza Virus (strain NIH 47885; PC/Gene protein sequence name PVGLF_p13H4;

(FIG. 25). In addition, the two motifs have a DP178-like hit just slightly C-terminal at amino acids 207-241. Both motifs also have DP178-like hits nearer the transmembrane region including amino acids 457-497 and 462-512 respectively. Several PLZIP motif hits are also observed including 283-303 (P5LZIPC), 283-310 (P12LZIPC), 453-474 (P6LZIPC), and 453-481 (P23LZIPC). The Lupas algorithm predicts that amino acids 122-176 may have a propensity to form a coiled-coil.

16. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES OF INFLUENZA A VIRUS

FIG. 26 illustrates the Lupas prediction for a coiled coil in Influenza A Virus (strain A/Aichi/2/68) at residues 379-436, as well as the motif hits for 107x178x4 at amino acids 387-453, and for ALLMOTI5 at residues 380-456. Residues 383-471 (38-125 of HA2) were shown by Carr and Kim to be an extended coiled coil when under acidic pH (Carr and Kim, 1993, Cell 73: 823-832). The Lupas algorithm predicts a coiled-coil at residues 379-436. All three methods successfully predicted the region shown to actually have coiled-coil structure; however, ALLMOTI5 predicted the greatest portion of the 88 residue stretch.

17. EXAMPLE: POTENTIAL RESPIRATORY SYNCYTIAL VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, respiratory syncytial virus (RSV) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 11, above, were tested for anti-RSV activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated

that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

17.1 MATERIALS AND METHODS

Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptides were synthesized according to the methods described, above, in Section 6.1. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-RSV antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of HEp2 cells acutely infected with RSV (i.e., cells which are infected with a multiplicity of infection of greater than 2) to fuse and cause syncytial formation on a monolayer of uninfected an uninfected line of Hep-2 cells. The lower the observed level of fusion, the greater the antiviral activity of the peptide was determined to be.

Uninfected confluent monolayers of Hep-2 cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics (penicillin/streptomycin; Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

To prepare Hep2 cells for addition to uninfected cells, cultures of acutely infected Hep2 cells were

washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected Hep-2 cells.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Hep-2 cells, then adding peptides (at the dilutions described below) in 3% EMEM, and 100 acutely RSV-infected Hep2 cells per well. Wells were then incubated at 37°C for 48 hours.

After incubation, cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of either Crystal Violet stain or XTT. With respect to Crystal Violet, approximately 50μl 0.25% Crystal Violet stain in methanol were added to each well. The wells were rinsed immediately, to remove excess stain, and were allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

With respect to XTT (2,3-bis[2-Methoxy-4-nitro-5-sulfophenyl]-2H-tetrazolium-5-carboxyanilide inner salt), 50μl XTT (1mg/ml in RPMI buffered with 100mM HEPES, pH 7.2-7.4, plus 5% DMSO) were added to each well. The $OD_{450/690}$ was measured (after blanking against growth medium without cells or reagents, and against reagents) according to standard procedures.

Peptides: The peptides characterized in the study presented herein were:

1) peptides T-142 to T-155 and T-575, as shown in FIG. 27A, and peptides T-22 to T-27, T-68, T-334 and T-371 to T-375 and T-575, as shown in FIG. 27B;

2) peptides T-120 to T-141 and T-576, as shown in FIG. 27B, and peptides T-12, T-13, T-15, T-19, T-28 to T-30, T-66, T-69, T-70 and T-576, as shown in FIG. 27D; and

3) peptides T-67 and T-104 to T-119 and T-384, as shown in FIG. 28A, and peptides T-71, T-613 to T-617, T-662 to T-676 and T-730, as shown in FIG. 28B.

The peptides of group 1 represent portions of the RSV F2 protein DP178/107-like region. The peptides of group 2 represent portions of the RSV F1 protein DP107-like region. The peptides of groups 3 represent portions of the RSV F1 protein DP178-like region.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used. The IC_{50} data for each peptide represents the average of several experiments conducted utilizing that peptide.

17.2 RESULTS

The data summarized in FIGS. 27A-B and 28A-B represent antiviral and structural information obtained from peptides derived from the RSV F2 DP178/DP107-like F2 region (FIG. 27A-B), the RSV F1 DP-107-like region (FIG. 27C-D) and the RSV DP178-like F2 region (FIG. 28A-B).

As shown in FIGS. 27A-D, a number of the RSV DP178/DP107-like peptides exhibited a detectable level of antiviral activity. Peptides from the RSV DP178/DP107-like F2 region (FIG. 27A-B), for example, T-142 to T-145 and T-334 purfied peptides, exhibited detectable levels of antiviral activity, as evidenced by their IC_{50} values. Further, a number of RSV F1 DP107-like peptides (FIG. 27C-D) exhibited a sizable level of antiviral activity as purified peptides, including, for example, peptides T-124 to T-127, T-

131, T-135 and T-137 to T-139, as demonstrated by their low IC_{50} values. In addition, CD analysis FIG. 27A, 27C) reveals that many of the peptides exhibit some detectable level of helical structure.

The results summarized in FIG. 28A-B demonstrate that a number of DP178-like purified peptides exhibit a range of potent anti-viral activity. These peptides include, for example, T-67, T-104, T-105 and T-107 to T-119, as listed in FIG. 28A, and T-665 to T-669 and T-671 to T-673, as listed in FIG. 28B. In addition, some of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, successfully identified viral peptide domains that represent highly promising anti-RSV antiviral compounds.

18. EXAMPLE: POTENTIAL HUMAN PARAINFLUENZA VIRUS TYPE 3 DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, human parainfluenza virus type 3 (HPIV3) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 15, above, were tested for anti-HPIV3 activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

18.1 MATERIALS AND METHODS

Structural analyses: Structural analyses consisted of circular dichroism (CD) studies. The CD

spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-HPIV3 antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of Hep2 cells chronically infected with HPIV3 to fuse and cause syncytial formation on a monolayer of an uninfected line of CV-1W cells. The more potent the lower the observed level of fusion, the greater the antiviral activity of the peptide.

Uninfected confluent monolayers of CV-1W cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics/antimycotics (Gibco BRL Life Technologies Cat. No. 15040-017) added at 1%, and glutamine added at 1%.

To prepare Hep2 cells for addition to uninfected cells, cultures of chronically infected Hep2 cells were washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected CV-1W cells.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected CV-1W cells, then adding peptides (at the

dilutions described below) in 3% EMEM, and 500 chronically HPIV3-infected Hep2 cells per well. Wells were then incubated at 37°C for 24 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Alternatively, instead of Crystal Violet analysis, cells were assayed with XTT, as described, avove, in Section 17.1.

Peptides: The peptides characterized in the study presented herein were:

1) Peptides 157 to 188, as shown in FIG. 29A, and peptides T-38 to T-40, T-42 to T-46 and T-582, as shown in FIG. 29B. These peptides are derived from the DP107 region of the HPIV3 F1 fusion protein (represented by HPF3 107, as shown in FIG. 29A); and

2) Peptides 189 to 210, as shown in FIG. 30A, and T-269, T-626, T-383 and T-577 to T-579, as shown in FIG. 30B. These peptides are primarily derived from the DP178 region of the HPIV3 F1 fusion protein (represented by HPF3 178, as shown in FIG. 30A). Peptide T-626 contains two mutated amino acid resides (represented by a shaded background). Additionally, peptide T-577 represents F1 amino acids 65-100, T-578 represents F1 amino acids 207-242 and T-579 represents F1 amino acids 273-309.

Each peptide was tested at 2-fold serial dilutions ranging from 500µg/ml to approximately

500ng/ml. For each of the assays, a well containing no peptide was also used.

18.2 RESULTS

The data summarized in FIGS. 29A-B and 30A-B represent antiviral and structural information obtained from peptides derived from the HPIV3 fusion protein DP107-like region (FIG. 29A-B) and the HPIV3 fusion protein DP178-like region (FIG. 30A-B).

As shown in FIG. 29A-B, a number of the HPIV3 DP107-like peptides exhibited potent levels of antiviral activity. These peptides include, for example, peptides T-40, T-172 to T-175, T-178, T-184 and T-185.

The results summarized in FIG. 30A-B demonstrate that a number of the DP178-like peptides tested exhibit a range of anti-viral activity. These peptides include, for example, peptides 194 to 211, as evidenced by their low IC_{50} values. In fact, peptides 201 to 205 exhibit IC_{50} values in the nanogram/ml range. In addition, many of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, have successfully identified viral peptide domains that represent highly promising anti-HPIV3 antiviral compounds.

19. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN IMMUNODEFICIENCY VIRUS

FIG. 31 represents search results for SIV isolate MM251 (PC/Gene® protein sequence PENV_SIVM2). Both 107x178x4 and ALLMOTI5 search motifs identified two regions with similarities to DP107 and/or DP178.

The peptide regions found by 107x178x4 were located at amino acid residues 156-215 and 277-289. The peptide regions found by ALLMOTI5 were located at

amino acid residues 156-219 and 245-286. Both motifs, therefore, identify similar regions.

Interestingly, the first SIV peptide region (i.e., from amino acid residue 156 to approximately amino acid residue 219) correlates with a DP107 region, while the second region identified (i.e., from approximately amino acid residue 245 to approximately amino acid residue 289) correlates with the DP178 region of HIV. In fact, an alignment of SIV isolate MM251 and HIV isolate BRU, followed by a selection of the best peptide matches for HIV DP107 and DP178, reveals that the best matches are found within the peptide regions identified by the 107x178x4 and ALLMOTI5 search motifs.

It should be noted that a potential coiled-coil region at amino acid residues 242-282 is predicted by the Lupas program. This is similar to the observation in HIV in which the coiled-coil is predicted by the Lupas program to be in the DP178 rather than in the DP107 region. It is possible, therefore, that SIV may be similar to HIV in that it may contain a coiled-coil structure in the DP107 region, despite such a structure being missed by the Lupas algorithm. Likewise, it may be that the region corresponding to a DP178 analog in SIV may exhibit an undefined structure, despite the Lupas program's prediction of a coiled-coil structure.

20. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN EPSTEIN-BARR VIRUS

The results presented herein describe the identification of DP178/DP107 analogs within two different Epstein-Barr Virus proteins. Epstein-Barr is a human herpes virus which is the causative agent of, for example, infectious mononucleosis (IM), and is also associated with nasopharyngeal carcinomas (NPC), Burkitt's lymphoma and other diseases. The virus predominantly exists in the latent form and is activated by a variety of stimuli.

FIG. 32 depicts the search motif results for the Epstein-Barr Virus (Strain B95-8; PC/Gene® protein sequence PVGLB_EBV) glycoprotein gp110 precursor (gp115). The 107x178x4 motif identified two regions of interest, namely the regions covered by amino acid residues 95-122 and 631-658. One PZIP region was identified at amino acid residue 732-752 which is most likely a cytoplasmic region of the protein. The Lupas algorithm predicts a coiled-coil structure for amino acids 657-684. No ALLMOTI5 regions were identified.

FIG. 33 depicts the search motif results for the Zebra (or EB1) trans-activator protein (BZLF1) of the above-identified Epstein-Barr virus. This protein is a transcription factor which represents the primary mediator of viral reactivation. It is a member of the b-ZIP family of transcription factors and shares significant homology with the basic DNA-binding and dimerization domains of the cellular oncogenes c-fos and C/EBP. The Zebra protein functions as a homodimer.

Search results domonstrate that the Zebra protein exhibits a single region which is predicted to be either of DP107 or DP178 similarity, and is found between the known DNA binding and dimerization regions of the protein. Specifically, this region is located

at amino acid residues 193-220, as shown in FIG. 33. The Lupas program predicted no coiled-coil regions.

21. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN MEASLES VIRUS

FIG. 34 illustrates the motif search results for the fusion protein F1 of measles virus, strain Edmonston (PC Gene® protein sequence PVGLF_MEASE), successfully identifying DP178/DP107 analogs.

The 107x178x4 motif identifies a single region at amino acid residues 228-262. The ALLMOTI5 search motif identifies three regions, including amino acid residues 116-184, 228-269 and 452-500. Three regions containing proline residues followed by a leucine zipper-like sequence were found beginning at proline residues 214, 286 and 451.

The Lupas program identified two regions it predicted had potential for coiled-coil structure, which include amino acid residues 141-172 and 444-483.

22. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN HEPATITIS B VIRUS

FIG. 35 depicts the results of a PZIP motif search conducted on the Hepatitis B virus subtype AYW. Two regions of interest within the major surface antigen precursor S protein were identified. The first lies just C-terminal to the proposed fusion peptide of the major surface antigen (Hbs) which is found at amino acid residues 174-191. The second region is located at amino acid residues 233-267. The Lupas program predicts no coiled-coil repeat regions.

In order to test the potential anti-HBV antiviral activity of these D178/DP107 analog regions, peptides derived from area around the analog regions are synthesized, as shown in FIG. 52A-B. These peptides represent one amino acid peptide "walks" through the

putative DP178/DP107 analog regions. The peptides are synthesized according to standard Fmoc chemistry on Rinkamide MBHA resins to provide for carboxy terminal blockade (Chang, C.D. and Meinhofer, J., 1978, Int. J. Pept. Protein Res. 11:246-249; Fields, G.B. and Noble, R.L., 1990, Int. J. Pept. Protein Res. 35:161-214). Follwing complete synthesis, the peptide amino-terminus is blocked through automated acetylation and the peptide is cleaved with trifluoroacetic acid (TFA) and the appropriate scavengers (King, D.S. et al., 1990, Int. J. Pept. Res. 36:255-266). After cleavage, the peptide is precipitated with ether and dried under vacuum for 24 hours.

The anti-HBV activity of the peptides is tested by utilizing standard assays to determine the test peptide concentration required to cause an acceptable (e.g., 90%) decrease in the amount of viral progeny formed by cells exposed to an HBV viral inoculum. Candidate antivial peptides are further characterized in model systems such as wood chuck tissue culture and animal sytems, prior to testing on humans.

23. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN MASON-PFIZER MONKEY VIRUS

The results depicted herein illustrate the results of search motifs conducted on the Simian Mason-Pfizer monkey virus. The motifs reveal DP178/DP107 analogs within the enveloped (TM) protein GP20, as shown in FIG. 36.

The 107x178x4 motifs identifies a region at amino acid residues 422-470. The ALLMOTI5 finds a region at amino acid residues 408-474. The Lupas program predicted a coiled-coil structure a amino acids 424-459.

24. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN BACTERIAL PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to sequences present in proteins of a variety of bacterial species.

FIG. 37 depicts the search motif results for the Pseudomonas aeruginosa fimbrial protein (Pilin). Two regions were identified by motifs 107x178x4 and ALLMOTI5. The regions located at amino acid residues 30-67 and 80-144 were identified by the 107x178x4 motif. The regions at amino acid residues 30-68 and 80-125 were identified by the ALLMOTI5.

FIG. 38 depicts the search motif results for the Pseudomonas gonorrhoeae fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 66-97 was identified by the 107x178x4 motif. The region located at amino acid residues 66-125 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 39 depicts the search motif results for the Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 40 depicts the search motif results for the Staphylococcus aureus toxic shock syndrome Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The

region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 41 summarizes the motif search results conducted on the Staphylococcus aureus enterotoxin Type E protein. These results demonstrate the successful identification of DP178/DP107 analogs corresponding to peptide sequences within this protein, as described below.

The ALLMOTI5 motif identified a region at amino acid residues 22-27. The 107x178x4 motif identified two regions, with the first at amino acid residues 26-69 and the second at 88-115. A P12LZIPC motif search identified two regions, at amino acid residues 163-181 and 230-250.

The Lupas program predicted a region with a high propensity for coiling at amino acid residues 25-54. This sequence is completely contained within the first region identified by both ALLMOTI5 and 107x178x4 motifs.

FIG. 42 depicts the search motif results conducted on a second Staphylococcus aureus toxin, enterotoxin A. Two regions were identified by the ALLMOTI5 motif, at amino acid residues 22-70 and amino acid residues 164-205. The 107x178x4 motif found two regions, the first at amino acid residues 26-69 and the second at amino acid residues 165-192. A P23LZIPC motif search revealed a region at amino acid residues 216-250. No coiled-coil regions were predicted by the Lupas program.

FIG. 43 shows the motif search results conducted on the E. coli heat labile enterotoxin A protein, demonstrating that identification of DP178/DP107 analogs corresponding to peptides located within this protein. Two regions were identified by the ALLMOTI5 motif, with the first residing at amino acid residues

55-115, and the second residing at amino acid residues 216-254. The 107x178x4 motif identified a single region at amino acid residues 78-105. No coiled-coil regions were predicted by the Lupas program.

25. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS WITHIN VARIOUS HUMAN PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to peptide sequences present within several different human proteins.

FIG. 44 illustrates the search motif results conducted on the human c-fos oncoprotein. The ALLMOTI5 motif identified a single region at amino acid residues 155-193. The 107x178x4 motif identified one region at amino acid residues 162-193. The Lupas program predicted a region at amino acid residues 148-201 to have coiled-coil structure.

FIG. 45 illustrates the search motif results conducted on the human lupus KU autoantigen protein P70. The ALLMOTI5 motif identified a single region at amino acid residues 229-280. The 107x178x4 motif identified one region at amino acid residues 235-292. The Lupas program predicted a region at amino acid residues 232-267 to have coiled-coil structure.

FIG. 46 illustrates the search motif results conducted on the human zinc finger protein 10. The ALLMOTI5 motif identified a single region at amino acid residues 29-81. The 107x178x4 motif identified one region at amino acid residues 29-56. A P23LZIPC motif search found a single region at amino acid residues 420-457. The Lupas program predicted no coiled-coil regions.

26. EXAMPLE: POTENTIAL MEASLES VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, measles (MeV) virus DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 21, above, are tested for anti-MeV activity. Additionally, circular dichroism (CD) structural analyses are conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that none of the these peptides exhibit a substantial helical character.

26.1 MATERIALS AND METHODS

Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-MeV antiviral activity syncytial reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of Vero cells acutely infected with MeV (i.e., cells which are infected with a multiplicity of infection of 2-3) to fuse and cause syncytial formation on a monolayer of an uninfected line of Vero cells. The more potent the peptide, the lower the observed level of fusion, the greater the antiviral activity of the peptide.

Uninfected confluent monolayers of Vero cells were grown in microtiter wells in 10% FBS EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum

[FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 10%, antibiotics/antimycotics (Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

To prepare acutely infected Vero cells for addition to the uninfected cells, cultures of acutely infected Vero cells were washed twice with HBSS (Bio Whittaker Cat. No. 10-543F) and cell monolayers were removed with trypsin (Bio Whittaker Cat. No. 17-161E). Once cells detached, media was added, any remaining clumps of cells were dispersed, and hemacytometer cell counts were performed.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and 50-100 acutely MeV-infected Vero cells per well. Wells were then incubated at 37°C for a maximum of 18 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Anti-MeV antiviral activity plaque reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of MeV to infect permissive, uninfected Vero cells, leading to the infected cells' fusing with uninfected cells to produce syncytia. The lower the observed level of syncytial formation, the greater the antiviral activity of the peptide.

Monolayers of uninfected Vero cells are grown as described above.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and MeV stock virus at a final concentration of 30 plaque forming units (PFU) per well. Wells were then incubated at 37°C for a minimum of 36 hours and a maximum of 48 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Peptides: The peptides characterized in the study presented herein were peptides T-252A0 to T-256A0, T-257B1/C1, and T-258B1 to T-265B0, and T-266A0 to T-268A0, as shown in FIG. 47. These peptides represent a walk through the DP178-like region of the MeV fusion protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

26.2 RESULTS

The data summarized in FIG. 47 represents antiviral and structural information obtained via "peptide walks" through the DP178-like region of the MeV fusion protein.

As shown in FIG. 47, the MeV DP178-like peptides exhibited a range of antiviral activity as crude peptides. Several of these peptides were chosen for purification and further antiviral characterization.

The IC_{50} values for such peptides were determined, as shown in FIG. 47, and ranged from 1.35μg/ml (T-257B1/C1) to 0.072μg/ml (T-265B1). None of the DP178-like peptides showed, by CD analysis, a detectable level of helicity.

Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-MeV antiviral compounds.

27. EXAMPLE: POTENTIAL SIV DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, simian immunodeficiency virus (SIV) DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9, 12 and 19, above, were tested for anti-SIV activity. It is demonstrated that several of the identified peptides exhibit potent antiviral capability.

27.1 MATERIALS AND METHODS

Anti-SIV antiviral assays: The assay utilized herein were as reported in Langolis et al. (Langolis, A.J. et al., 1991, AIDS Research and Human Retroviruses 7:713-720).

Peptides: The peptides characterized in the study presented herein were peptides T-391 to T-400, as shown in FIG. 48. These peptides represent a walk through the DP178-like region of the SIV TM protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

27.2 RESULTS

The data summarized in FIG. 48 represents antiviral information obtained via "peptide walks" through the DP178-like region of the SIV TM protein.

As shown in FIG. 48, peptides T-391 to T-400 were tested and exhibited a potent antiviral activity as crude peptides.

Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-SIV antiviral compounds.

28. EXAMPLE: ANTI-VIRAL ACTIVITY OF DP107 AND DP-178 PEPTIDE TRUNCATIONS AND MUTATIONS

The Example presented in this Section represents a study of the antiviral activity of DP107 and DP178 truncations and mutations. It is demonstrated that several of these DP107 and DP178 modified peptides exhibit substantial antiviral activity.

28.1 MATERIALS AND METHODS

Anti-HIV assays: The antiviral assays performed were as those described, above, in Section 6.1. Assays utilized HIV-1/IIIb and/or HIV-2 NIHZ isolates. Purified peptides were used, unless otherwise noted in FIGS. 49A-C.

Peptides: The peptides characterized in the study presented herein were:

1) FIGS. 49A-C present peptides derived from the region around and containing the DP178 region of the HIV-1 BRU isolate. Specifically, this region spanned from gp41 amino acid residue 615 to amino acid residue 717. The peptides listed contain truncations of this region and/or mutations

which vary from the DP178 sequence amino acid sequence. Further, certain of the peptides have had amino- and/or carboxy-terminal groups either added or removed, as indicated in the figures; and

2) FIG. 50. presents peptides which represent truncations of DP107 and/or the gp41 region surrounding the DP107 amino acid sequence of HIV-1 BRU isolate. Certain of the peptides are unblocked or biotinylated, as indicated in the figure.

Blocked peptides contained an acyl N-terminus and an amido C-terminus.

28.2 RESULTS

Anti-HIV antiviral data was obtained with the group 1 DP178-derived peptides listed in FIG. 49A-C. The full-length, non-mutant DP178 peptide (referred to in FIG. 49A-C as T20) results shown are for 4ng/ml.

In FIG. 49A, a number of the DP178 truncations exhibited a high level of antiviral activity, as evidenced by their low IC_{50} values. These include, for example, test peptides T-50, T-624, T-636 to T-641, T-645 to T-650, T-652 to T-654 and T-656. T-50 represents a test peptide which contains a point mutation, as indicated by the residue's shaded background. The HIV-1-derived test peptides exhibited a distinct strain-specific antiviral activity, in that none of the peptides tested on the HIV-2 NIHZ isolate demonstrated appreciable antti-HIV-2 antiviral activity.

Among the peptides listed in FIG. 49B, are test peptides representing the amino (T-4) and carboxy (T-3) terminal halves of DP178 were tested. The amino terminal peptide was not active (IC_{50}>400μg/ml) whereas the carboxy terminal peptide showed potent antiviral

activity (IC_{50}= 3μg/ml). A number of additional test peptides also exhibited a high level of antiviral activity. These included, for example, T-61/T-102, T-217 to T-221, T-235, T-381, T-677, T-377, T-590, T-378, T-591, T-271 to T-272, T-611, T-222 to T-223 and T-60/T-224. Certain of the antiviral peptides contain point mutations and/or amino acid residue additions which vary from the DP178 amino acid sequence.

In FIG. 49C, point mutations and/or amino and/or carboxy-terminal modifications are introduced into the DP178 amino acid sequence itself. As shown in the figure, the majority of the test peptides listed exhibit potent antiviral activity.

Truncations of the DP107 peptide (referred to in IG. 50 as T21) were also produced and tested, as shown in FIG. 50. FIG. 50 also presents data concerning blocked and unblocked peptides which contain additional amino acid residues from the gp41 region in which the DP107 sequence resides. Most of these peptides showed antiviral activity, as evidenced by their low IC_{50} values.

Thus, the results presented in this Section demonstrate that not only do the full length DP107 and DP178 peptides exhibit potent antiviral activity, but truncations and/or mutant versions of these peptides can also possess substantial antiviral character.

29: EXAMPLE: POTENTIAL EPSTEIN-BARR DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, peptides derived from the Epstein-Barr (EBV) DP-178/DP107 analog region of the Zebra protein identified, above, in the Example presented in Section 20 are described and tested for anti-EBV activity. It is demonstrated that among these peptides are ones which exhibit potential anti-viral activity.

29.1 MATERIALS AND METHODS

Electrophoretic Mobility Shift Assays (EMSA): Briefly, an EBV Zebra protein was synthesized utilizing SP6 RNA polymerase in vitro transcription and wheat germ in vitro translation systems (Promega Corporation recommendations; Butler, E.T. and Chamberlain, M.J., 1984, J. Biol. Chem. 257:5772; Pelham, H.R.B. and Jackson, R.J., 1976, Eur. J. Biochem. 67:247). The in vitro translated Zebra protein was then preincubated with increasing amounts of peptide up to 250 ng/ml prior to the addition of 10,000 to 20,000 c.p.m. of a ^{32}P-labeled Zebra response element DNA fragment. After a 20 minute incubation in the presence of the response element, the reaction was analyzed on a 4% non-denaturing polyacrylamide gel, followed by autoradiography, utilizing standard gel-shift procedures. The ability of a test peptide to prevent Zebra homodimer DNA binding was assayed by the peptide's ability to abolish the response element gel migration retardation characteristic of a protein-bound nucleic acid molecule.

Peptides: The peptides characterized in this study represent peptide walks through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. Specifically, the peptide walks covered the region from amino acid residue 173 to amino acid residue 246 of the EBV Zebra protein.

Each of the tested peptides were analyzed at a range of concentrations, with 150ng/ml being the lowest concentration at which any of the peptides exerted an inhibitory effect.

29.2 RESULTS

The EBV Zebra protein transcription factor contains a DP178/DP107 analog region, as demonstrated in the Example presented, above, in Section 20. This protein appears to be the primary factor responsible for the reactivation capability of the virus. A method by which the DNA-binding function of the Zebra virus may be abolished may, therefore, represent an effective antiviral technique. In order to identify potential anti-EBV DP178/DP107 peptides, therefore, peptides derived from the region identified in Section 20, above, were tested for their ability to inhibit Zebra protein DNA binding.

The test peptides' ability to inhibit Zebra protein DNA binding was assayed via the EMSA assays described, above, in Section 28.1. The data summarized in FIG. 51A-B presents the results of EMSA assays of the listed EBV test peptides. These peptides represent one amino acid "walks" through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. As shown in FIG. 51A-B, the region from which these peptides are derived lies from EBV Zebra protein amino acid residue 173 to 246. A number of the test peptides which were assayed exhibited an ability to inhibit Zebra protein homodimer DNA binding, including 439, 441, 444 and 445.

Those peptides which exhibit an ability to inhibit Zebra protein DNA binding represent potential anti-EBV antiviral compounds whose ability to inhibit EBV infection can be further characterized.

The present invention is not to be limited in scope by the specific embodiments described which are intended as single illustrations of individual aspects

of the invention, and functionally equivalent methods and components are within the scope of the invention. Indeed, various modifications of the invention, in addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description and accompanying drawings. Such modifications are intended to fall within the scope of the appended claims.

WHAT IS CLAIMED IS:

1. An isolated peptide recognized by an ALLMOTI5, 107x178x4 or a PLZIP sequence search motif.

2. The peptide of Claim 1 wherein the peptide corresponds to a peptide present in a virus.

3. The peptide of Claim 2 in which the virus is HIV-1 or HIV-2.

4. The peptide of Claim 2 in which the virus is a respiratory syncytial virus.

5. The peptide of Claim 2 in which the virus is a human parainfluenza virus.

6. The peptide of Claim 2 in which the virus is an influenza virus.

7. The peptide of Claim 2 in which the virus is a hepatitis B virus.

8. The peptide of Claim 2 wherein the virus is an Epstein-Barr virus.

9. A method for the inhibition of transmission of a virus to a cell, comprising contacting the cell with an effective concentration of a peptide recognized by an ALLMOTI5, 107x178x4 or a PLZIP sequence search motif for an effective period of time so that no infection of the cell by the virus occurs.

10. The method of Claim 9 wherein the virus is HIV-1 or HIV-2.

11. The method of Claim 9 wherein the virus is a respiratory syncytial virus.

12. The method of Claim 9 wherein the virus is a human parainfluenza virus.

13. The method of Claim 9 wherein the virus is an influenza virus.

14. The method of Claim 9 in which the virus is a hepatitis B virus.

15. The method of Claim 9 wherein the virus is an Epstein-Barr virus.

HIV1LAI	(DP-178; SEQ ID:1)	YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF
HIV1SF2	(DP-185; SEQ ID:3)	YTNTIYNLLEESQNQQEKNEQELLELDKWASLWNWF
HIV1RF	(SEQ ID:4)	YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF
HIV1MN	(SEQ ID:5)	YTSLIYSLLEKSQTQQEKNEQELLELDKWASLWNWF
HIV2ROD	(SEQ ID:6)	LEANISKSLEQAQIQQEKNMYELQKLNSWDIFGNWF
HIV2NIHZ	(SEQ ID:7)	LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL
DP180	(SEQ ID:2)	SSESFTLLEQWNNWKLQLAEQWLEQINEKHYLEDIS
DP118	(SEQ ID:10)	QQLLDVVKRQQEMLRLTVWGTKNLQARVTAIEKYLKDQ
DP125	(SEQ ID:8)	CGGNNLLRAIEAQQHLLQLTVWGIKQLQARILAVERYLKDQ
DP116	(SEQ ID:9)	LQARILAVERYLKDQQQ

FIG.1

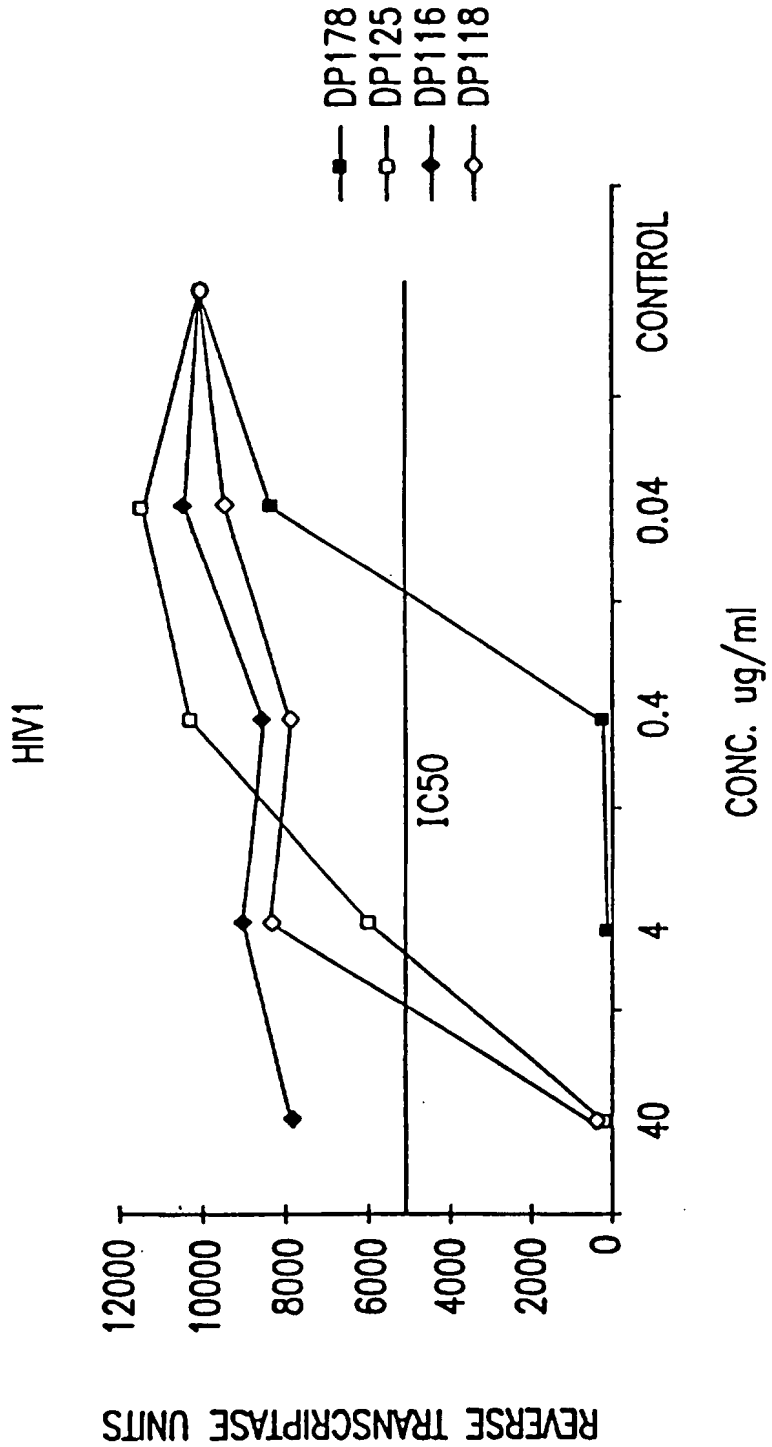

DP178
DP125
DP116
DP118
HIV1
IC50
CONTROL
0.04
0.4
4
40
CONC. ug/ml
12000
10000
8000
6000
4000
2000
0
REVERSE TRANSCRIPTASE UNITS

FIG. 2

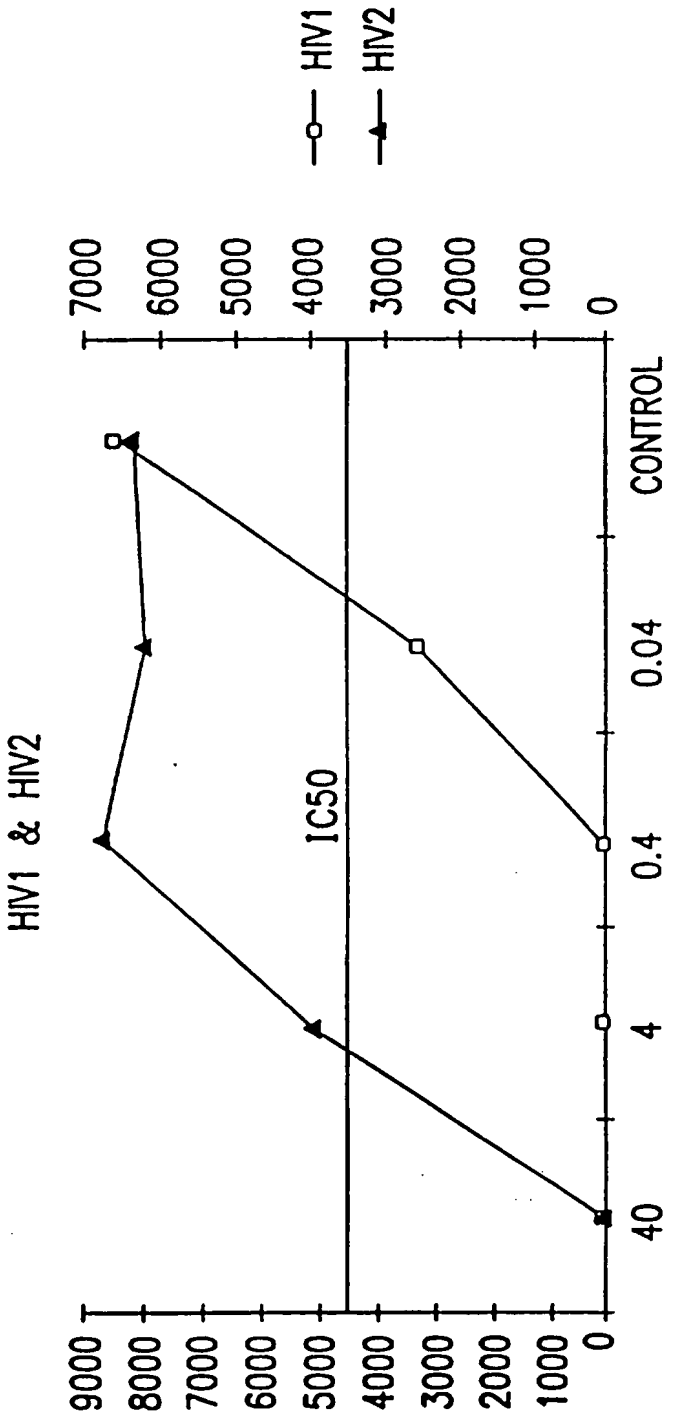

HIV1
HIV2
HIV1 & HIV2
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
7000
6000
5000
4000
3000
2000
1000
0
IC50
40
4
0.4
0.04
CONTROL
PD178 CONC. ug/ml

FIG.3

Number of Syncytia/well: concentration in μg/ml (micrograms/ml)

DP178	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	0	67
HIV1MN	0	0	0	0	0	ND	ND	ND	34
HIV1RF	0	0	0	0	0	ND	ND	ND	65
HIV1SF2	0	0	0	0	0	ND	ND	ND	58

DP125	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	54	69	80	75	79	82	67
HIV1MN	0	0	30	36	ND	ND	ND	ND	34
HIV1RF	0	0	67	63	ND	ND	ND	ND	65
HIV1SF2	0	0	9	66	ND	ND	ND	ND	58

DP116	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	75	ND	ND	ND	ND	ND	ND	ND	67
HIV1MN	35	ND	ND	ND	ND	ND	ND	ND	34
HIV1RF	81	ND	ND	ND	ND	ND	ND	ND	65
HIV1SF2	81	ND	ND	ND	ND	ND	ND	ND	58

FIG.4A

DP180	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	50	>45	>45	>45	>45	>45	>45	>45	58

DP185	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	ND	60

FIG.4B

HIV1

	Number of Syncytio/well: concentration in ng/ml (nanograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	0	0	0	0	0	14	20	48
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	ND	48	ND	ND	ND	ND	ND	ND

HIV2

	Number of Syncytio/well: concentration in µg/ml (micrograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	50	54	55	57	63	77	78	76
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	ND	58	ND	ND	ND	ND	ND	ND

FIG.5

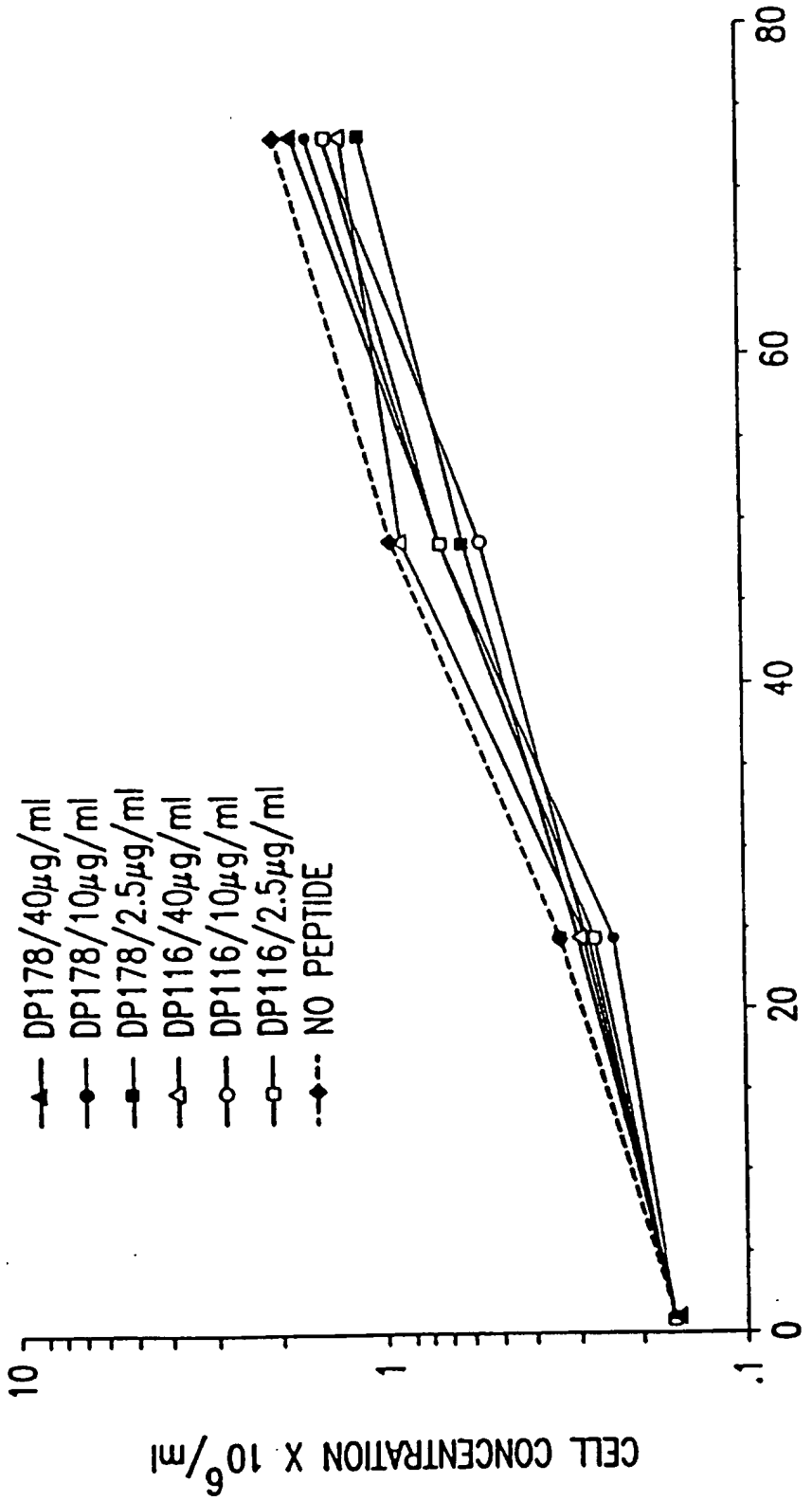

CELL CONCENTRATION X 10^6/ml
10
1
.1
0
20
40
60
80
HOURS
DP178/40μg/ml
DP178/10μg/ml
DP178/2.5μg/ml
DP116/40μg/ml
DP116/10μg/ml
DP116/2.5μg/ml
NO PEPTIDE

FIG.6

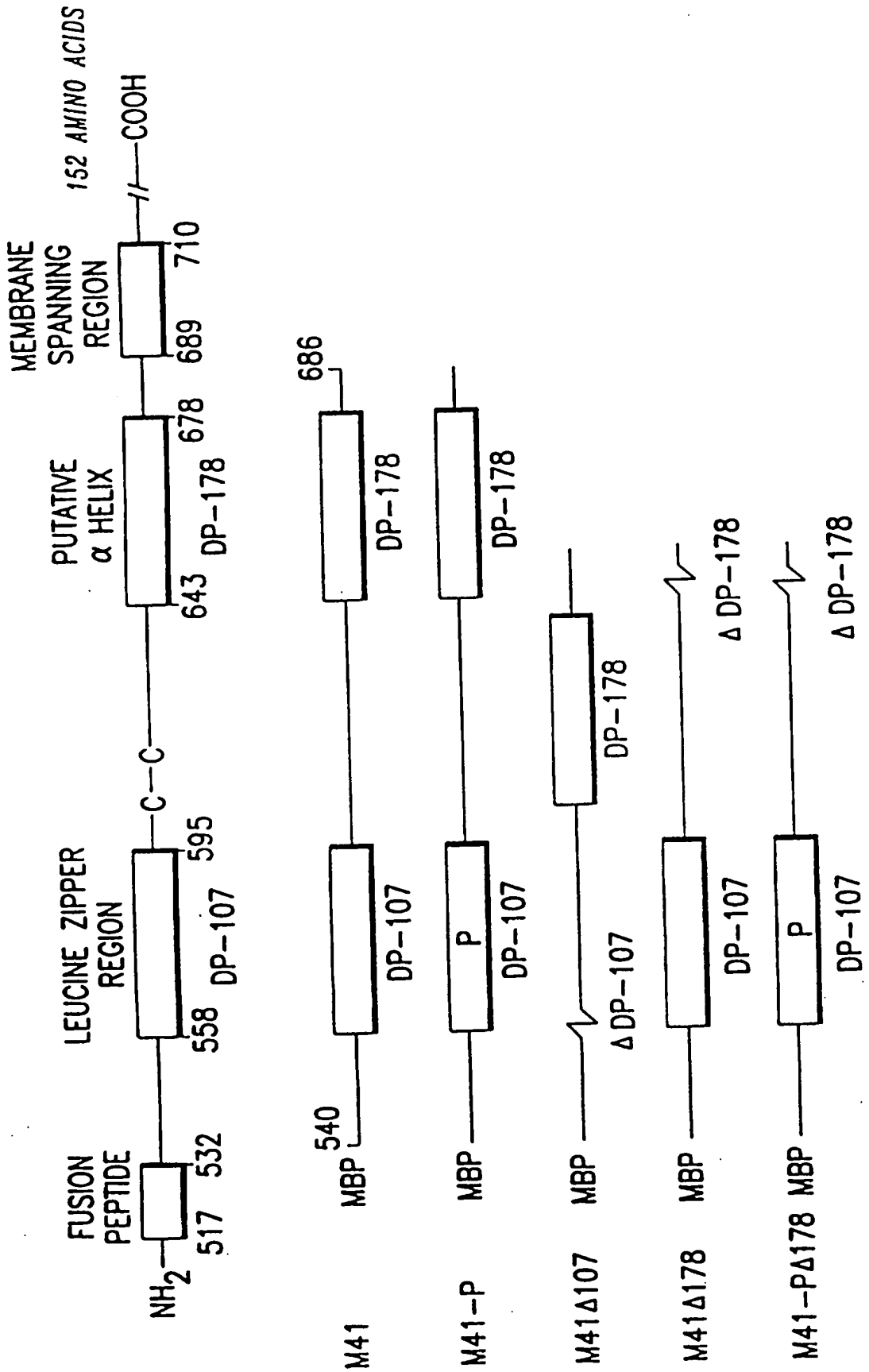

NH2
FUSION PEPTIDE
517
532
LEUCINE ZIPPER REGION
558
DP-107
595
C—C
PUTATIVE α HELIX
643
DP-178
678
MEMBRANE SPANNING REGION
689
710
152 AMINO ACIDS
COOH
M41
MBP
540
DP-107
DP-178
686
M41-P
MBP
P
DP-107
DP-178
M41Δ107
MBP
ΔDP-107
DP-178
M41Δ178
MBP
DP-107
ΔDP-178
M41-PΔ178
MBP
P
DP-107
ΔDP-178

FIG. 7

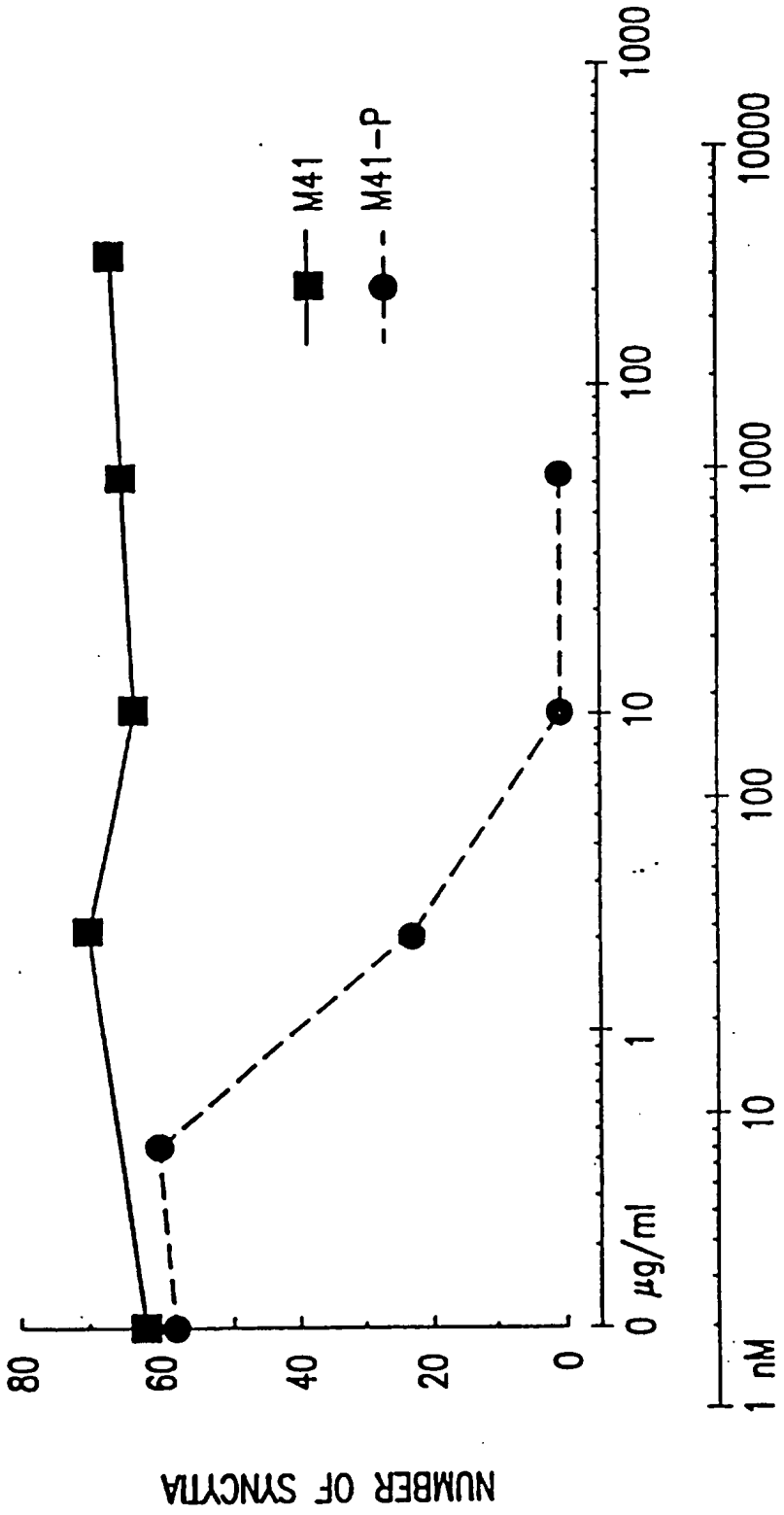

M41
M41-P
NUMBER OF SYNCYTIA
80
60
40
20
0
0 µg/ml
1 nM
1000
100
10
1
10
100
1000
10000

FIG.8

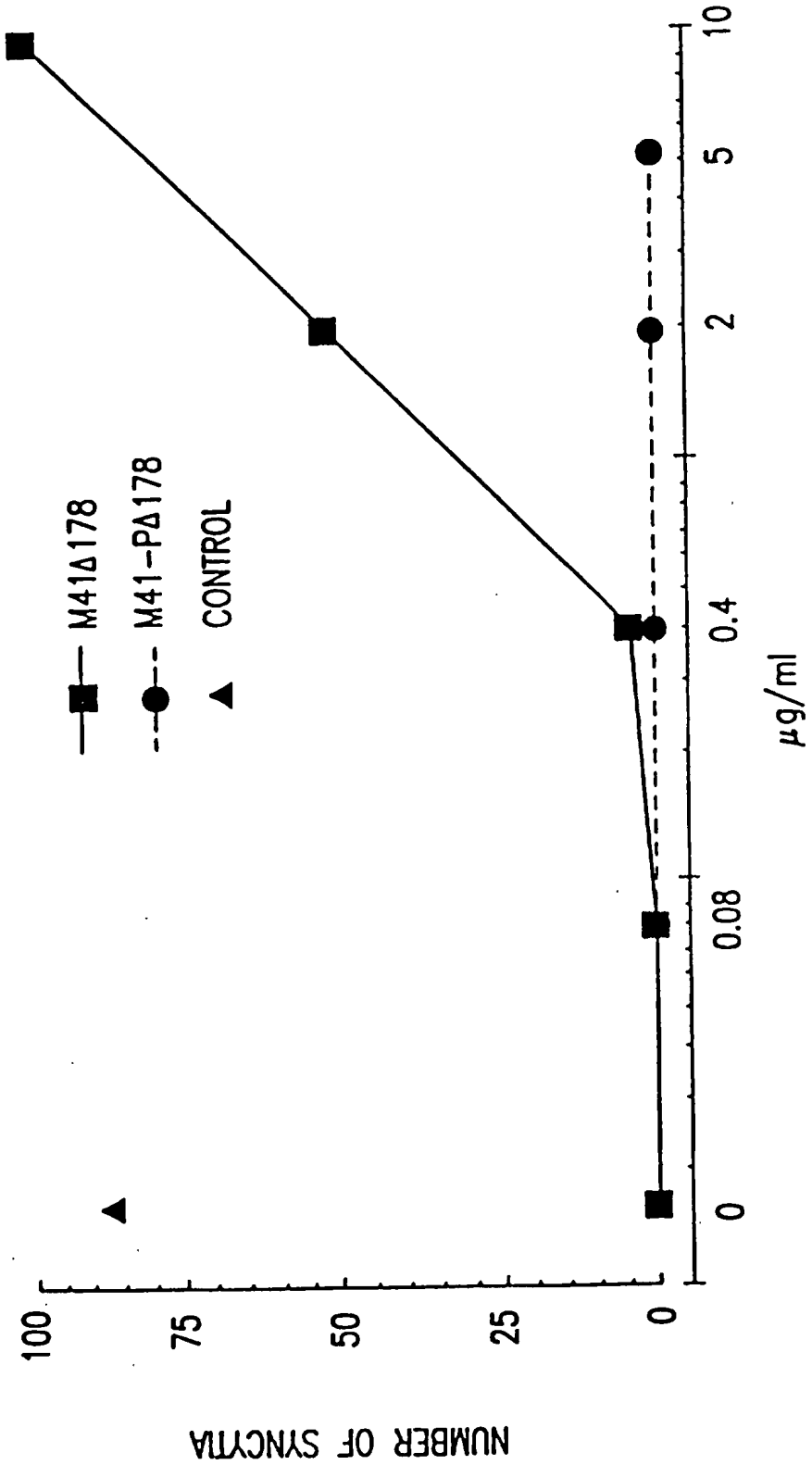

M41Δ178
M41-PΔ178
CONTROL
NUMBER OF SYNCYTIA
100
75
50
25
0
0
0.08
0.4
2
5
10
μg/ml

FIG.9

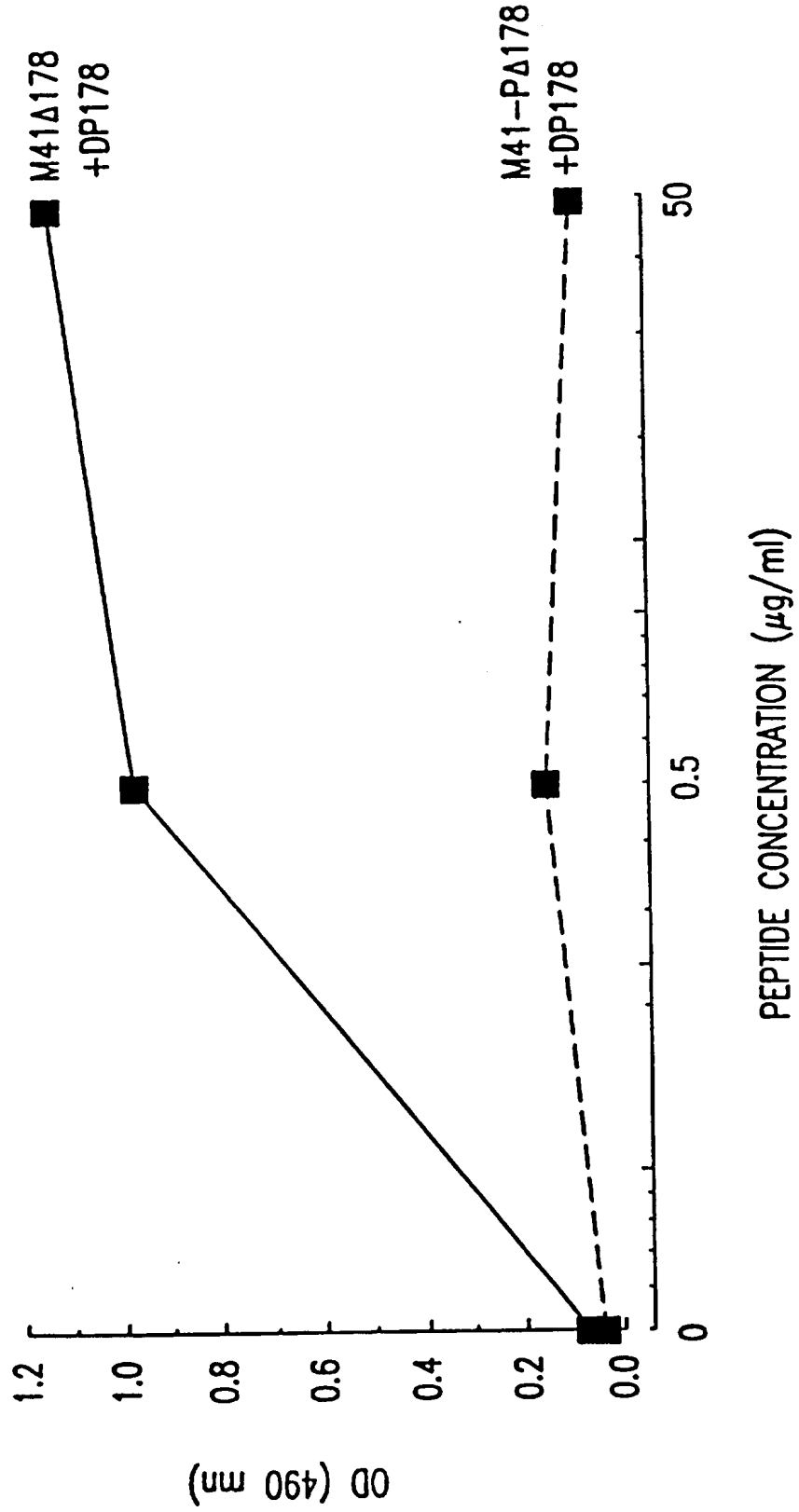

M41Δ178
+DP178
M41-PΔ178
+DP178
OD (490 mn)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
0.5
50
PEPTIDE CONCENTRATION (μg/ml)

FIG.10

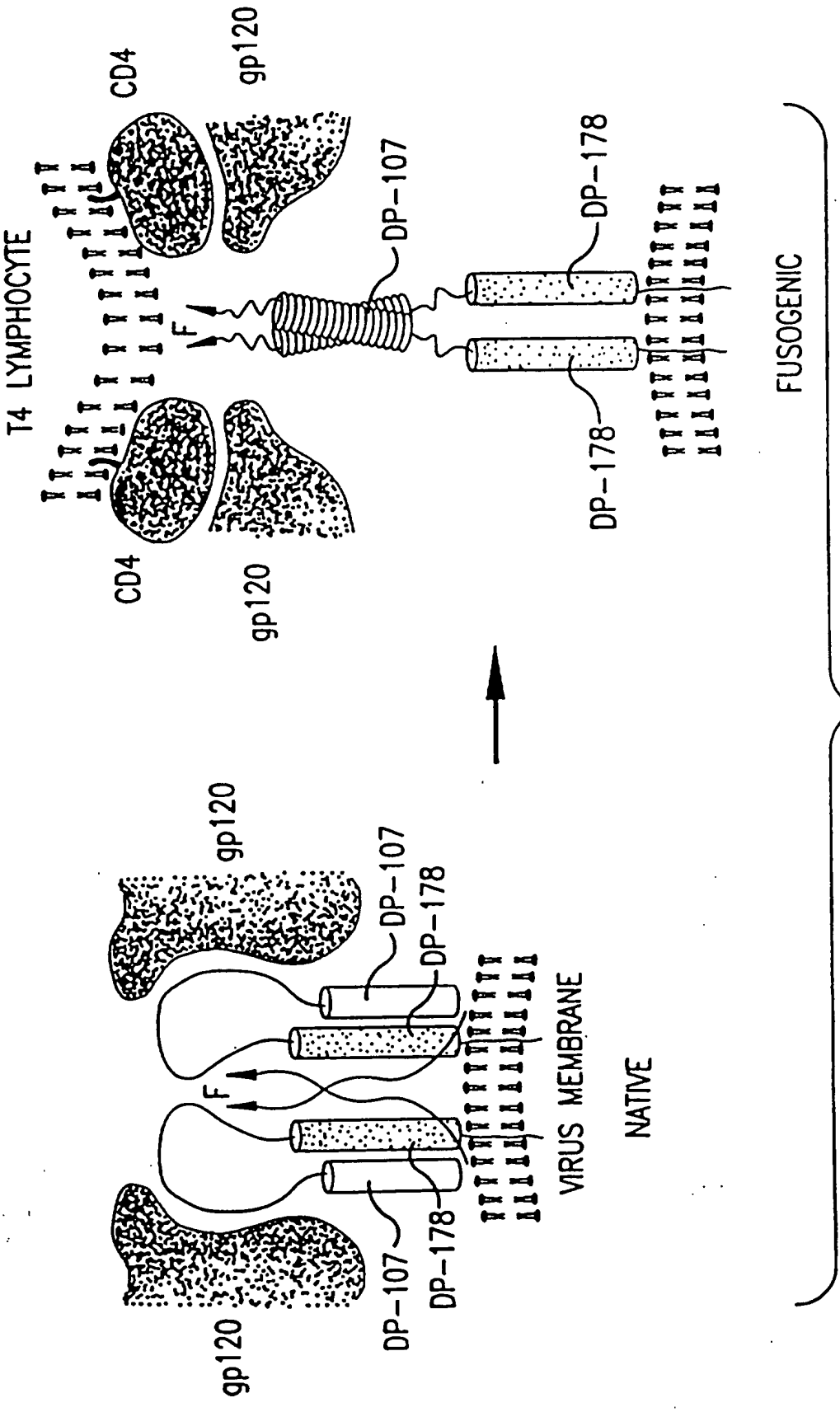

T4 LYMPHOCYTE
CD4
gp120
DP-107
DP-178
F
FUSOGENIC
NATIVE
VIRUS MEMBRANE

FIG.11A

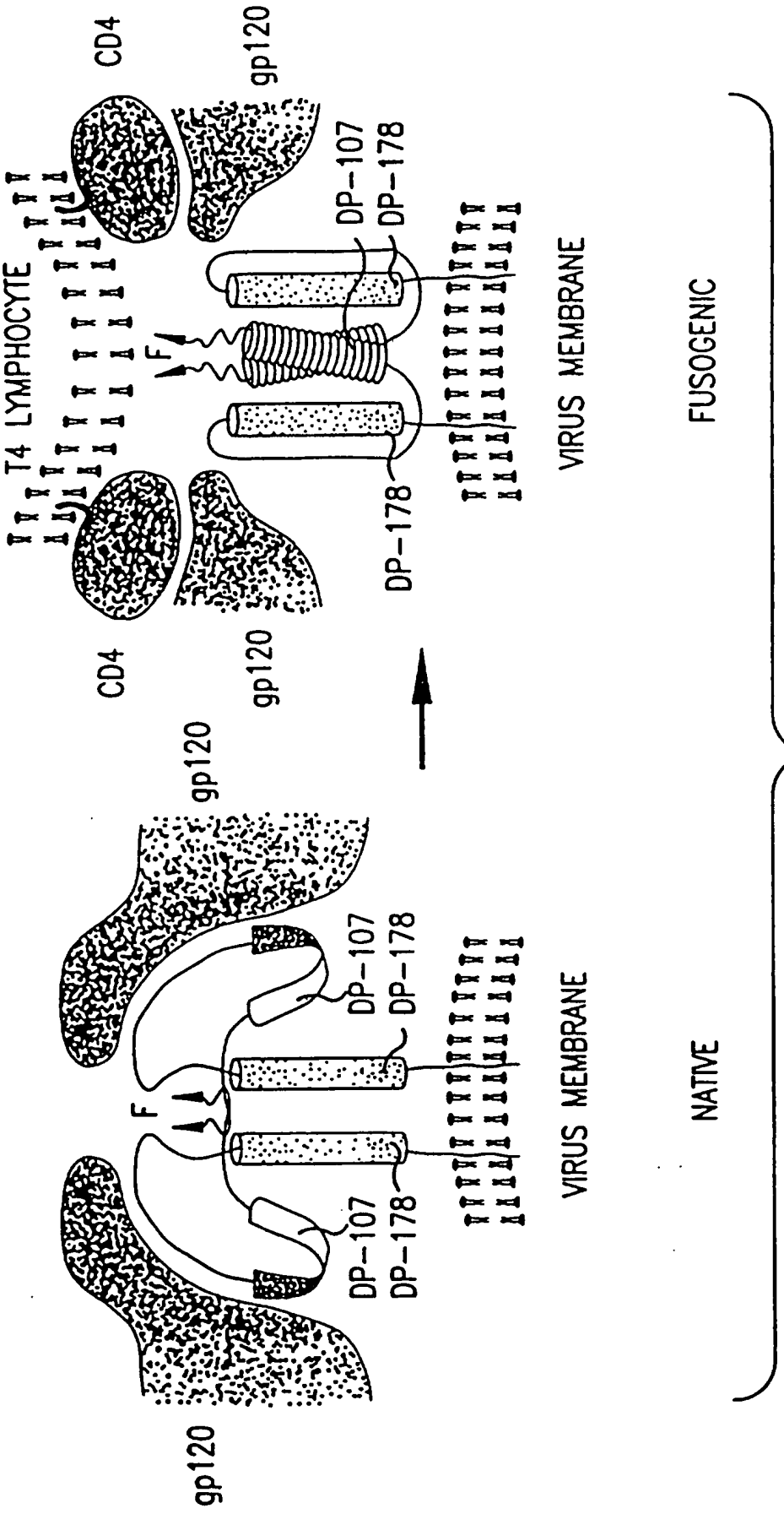

T4 LYMPHOCYTE
CD4
gp120
DP-107
DP-178
F
VIRUS MEMBRANE
FUSOGENIC
NATIVE

FIG.11B

7872-020 (SHEET 13 OF 63)

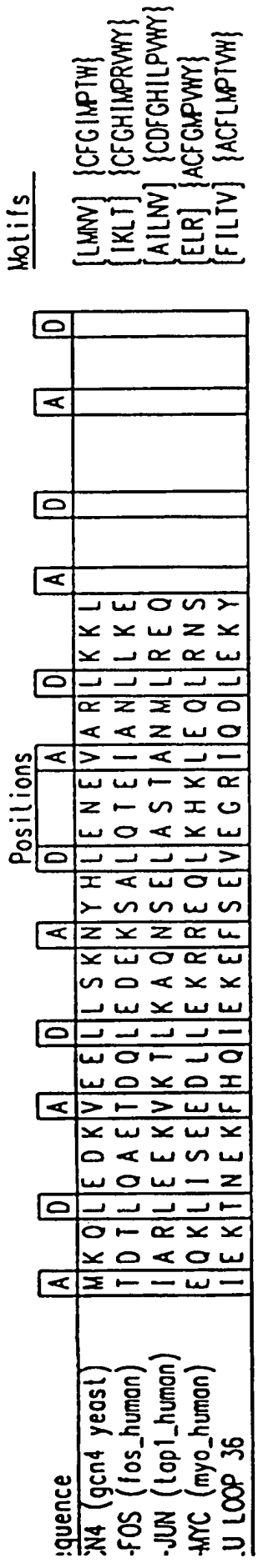


FIG.12

quence	Positions																																					Motifs
	A		D			A		D			A		D		A		D			A		D			A		D										
-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I									[ILQT] {CFIMPSTY}
-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L			[ILQTV] {CDFIMPST}
-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}
-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I											[EKLNQV] {CDFKMPSVY}
-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L				[EKLNQV] {CFKMPS}
-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[EKLNQV] {CFKMPS}
-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K											[EKLQY] {ACFGMPRVWY}
-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W				[EKLQWY] {CFGMPRVY}
-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F			[EFKLQWY] {CFGMPRVY}
-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K								[EILNQSY] {ACFGMPRVWY}
-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W		[EILNQSWY] {CFGMPRVY}
-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}

FIG.13

| | Positions | | |

| quence | Positions | | |

| | Positions | | |

uence	Positions																																Parent Motif	Hybrid Motif
	A		D			A		D			A		D			A		D			A		D			A		D						
4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] {CFGIMPTW}	
107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}	
178 (env_hv1bru)Y1=A	Y	T	S	L	I	M	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F				[EFKLQWY] {CFGMPRVY}	[EFIKLMNQTVWY] {CFMP}
14 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] {CFGIMPTW}	
107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}	
178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}	[EFILMNQRSTVWY] {CFMP}
14 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] {CFGIMPTW}	
107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] {CFKMPS}	
178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F				[EFKLQWY] {CFGMPRVY}	[EFKLMNQVWY] {CFMP}
14 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] {CFGIMPTW}	
107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] {CFKMPS}	
178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}	[EFIKLMNQSVWY] {CFMP}

FIG.17

| | Positions | | |

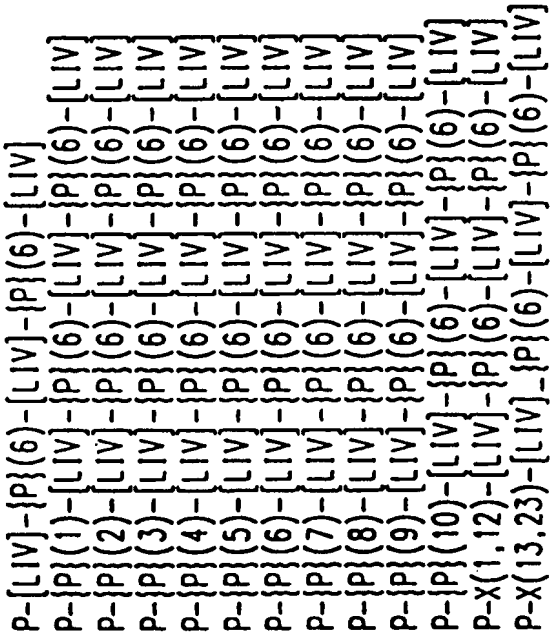

P-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-P(1)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(2)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(3)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(4)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(5)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(6)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(7)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(8)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(9)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-P(10)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-X(1,12)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]
P-X(13,23)-[LIV]-{P(6)-[LIV]-{P}(6)-[LIV]

FIG. 19

Fusion Peptide ▼ALLMOTI5▼ ♠107x178x4♠

▼.....FLGFLG A AGSTMGARSM TLTVQARQ ♠LLSGIVQQQ *DP107-NNL*

LRAIEAQQHL LQLTVWGIKQ LQARILAVER YLKDQ-DP107 QLLG♠▼ I WGC

♠107x178x4♠

▼ALLMOTI5▼ *LVS Coiled-Coil*

SGKLICT TAVP ▼WNASWS NKSLEQIWNN MTWM *E ♠WDRELNN *DP178-*

YTSLIHSL IEESQNQQEK NEQELLELDK WASLWNWF-DP178* NI

♦Transmembrane Region♦

TNWLWYIK♠ ♦IF IMIVGGLVGL RIVFAVLSIV NRVRQGYS▼ PL

♣P23LZIPC♣

SFQTHLPTPR GPDR ♣PEGIEE EGGERDRDRS IRLVNGSLAL IWDDLRSL♣ CL

▼ALLMOTI5▼ ♠107x178x4♠

F ▼SYHRLRDLL LIVTRIVELL GRRGW ♠EALKY WWNLLQYWSQ

ELKNSAVSLL NAT♠ AIAVAEG TDRVIEVVQG A▼ CRAIRHIPR

RIRQGLERIL L

FIG. 20

Fusion Peptide ▼ALLMOTI5▼

♦107x178x4♦

▼.....ELGEL LGVGSAIAS GVA ♦VSKVLHLEGEVNKIKSA

♣P1&12LZIPC♣

LLSTNKAVVS LSNGVSVLTS KVLDLKNYID KQ♦▼ LL ♣PIVNKQ

♦107x178x4♦

SC ♦SISNIETVI♣ EFQQKNNRLLEITREFSVNAG♦ VTTPVSTMLTNSELLSL

♣P1&12LZIPC♣

▼ALLMOTI5▼

INDM ♣PI ▼TNDQ KKLMSNNVQI V♣ RQQSYSI♣ MS IIKEEVLAYV

VQ▼ LPLYGVID TPCWKLHTSP LCTTNTKEGS NICLTRTDRG WYCDNAGSVS

FFPQAETCKV QSNRVFCDTM NSLTLPSEIN LCNVDIFNPK

YDCKIMTSKT DVSSSVITSL GAIVSCYGKT KCTASNKNRG

IIKTFSNGCDYVSNKGMDTV SVGNTLYYVN KQEGKSLYVK G

♣P7, 12, & 23LZIPC♣

♦107x178x4♦ ▼ALLMOTI5▼

EPIINFYDPLVF ♣PSDE ♦FDASISQVNEKINQSLAF ▼I♣ RKSDELL♣

♦Transmembrane Region♦

HNVNA♦ GK STTN ♦IMITTIIVIIVILLSLIAVGLLLY▼ C♦

KARSTPVTLS KDQLSGINNI AFSN

FIG. 21

Fusion
Peptide ▼ALLMOTI5▼ ▲107x178x4▲
.....FLGFLG ▼AAGTA MGAAA ▲TALTVQSQHLLAGILQQQKNLLAAV

▲107x178x4▲
EAQ▲ QQM ▲LKLTIWGVKNLNARVTALEKYLEDQARLN▲ AWG▼ CA

LVS Coiled-Coil
▼ALLMOTI5▼ ▲107x178x4▲
WKQVCHTTVP WQWNNRTPDW ▼NNMT *WLE ▲WERQISYLEGNIT

▲107x178x4▲
TQLEEARAQEEKNLD▲ AYQKLSS* WSDFWSW▼ FDF ▲SKWLN ♦ILK

♦Transmembrane Region♦
IGFLDVLGIIGLRLLYTV♦ YS▲ CIARVRQGYS PLSPQIHIHP WKGQPDNAEG

PGEGGDKRKN SSEPWQKESG TAEWKSNWCK RLTNWCSISS IWLYNS

▼ALLMOTI5▼
▼CLTL LVHLRSAFQY IQYGLGELKA AAQEAVVALA RLAQNAGYQIWL▼

ACRSAYRA IINSPRRVRQ GLEGILN

FIG. 22

Fusion Peptide ▼ALLMOTI5▼ ♠107x178x4♠ *LVS Coiled-Coil*

.....EAG ▼VVL AGVALGVATA AQITAGIALHQ ♠*SNLNAQAIQ

SLRTSLEQSNKAIEEIREATQETVIA* VQGVQDY♠ VNNEL▼ VP

▼ALLMOTI5▼
♠107x178x4♠
♣P6 & 12LZIPC♣

AMQHMSCELVGQRLGLRLLRYYTELLSIFGPSLRD ♣PISA ♠▼EISIQALIVAL

GGEIHKILEKLGYSGSD♠ MIAILESRGIKTKI▼ THVDLPGKF IILSISY

♣P1 & 12LZIPC♣
♣PTLSEVKGVIVHRLEAV♣ SYNIGSQEWYTTVPRYIATNGYLISNFDESSCVFVS

ESAICSQNSL YPMSPLLQQC IRGDTSSCAR TLVSGTMGNK FILSKGNIVA

NCASILCKCY STSTIINQSP DKLLTFIASD TCPLVEIDGA TIQVGGRQYP

LVS Coiled-Coil
▼ALLMOTI5▼
♣P12 & 23LZIPC♣

DMVYEGKVAL G ♣PAISLD ▼RL*DVGTNLGNALKKLDDAKVLI♣

♦Transmembrane Region♦

DSS♣ NQILETVR RS▼* SFN ♦EGSLL SVPILSCTAL ALLLLIVCC♦

K RRYQQTLKQH TKVDPAFKPD LTGTSKSYVR SL

FIG. 23

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....EIGAI IGSVALGVA TAAQITAASA LIQANQNAAN ♠ILRLIKESITA

TIEAVIIEVTDGLSQLAVA♠ VG KM♥ QQFVNDQFNNTAQELDCIKITQQV

♥ALLMOTI5♥
GVELNLYLTELTTV FGPQITSPAL ♥TQLTIQALYNAGGNMDYLLTKLGVG

✣P1 & 12LZIPC✣
NNQLSSLIGSGLIT GN♥ ✣PILYDSQT QLLGIQVTLP SVGNLNNMRATYLET

LSVST TKGFASALVP KVVTQVGSVI EELDTSYCIE TDLDLYCTRI VTFPMSPGIY

SCLNGNTSAC MYSKTEGALT TPYMTLKGSV IANCKMTTCR CADPPGIISQ

♥ALLMOTI5♥
♠107x178x4♠
NYGEAVSLID RHSCN ♠♥VLSLD GITLRLSGEF DATYQKNISI LDSQVIVTG

♦LVS Coiled-Coil♦ ♦Trans-
♦N LDISTELGNV NNSISNALDK LEESNSKLDK VNVKLTSTSA ♦LIT♦ YIA

membrane Region♦
LTAISLVCGILSLV♥♠ LACYLMY♦ KQKAQQKTLLWLGNNTLGQMRATTKM

FIG. 24

Fusion ▼ALLMOTIF▼
Peptide ♠107x178x4♠ *LVS Coiled-Coil*
.....FFGGV ♠IG ▼TIALG *VATSAQITAAVALVEAKQARSDIEKLKE

AIRDTNKAVQSVQSSIGNLIVAIKSVQ* DYVNKE▼♠ IVPSIARLGCEAAG

▼ALLMOTIF▼
♠107x178x4♠
LQLGIALTQH ♠▼YSELTNIFGDNIGSLQEKGIKLQGIASLYRTNITE▼♠

✣P5 & 12LZIPC✣
IFTTSTVDKYDIYDLLFTESIKVRVIDVDLNDYSITLQVRL ✣PLLTRLLNTQIYR

VDSISYNI✣ QNREWYI✣ PLPSHIMTKGAFLGGADVKECIEAFSSYIC

PSDPGFVLNHEMESCLSGNISQCPRTVVKSDIVPRYAFVNGGVVANCITT

TCTCNGIGNRINQPPDQGVKIITHKECNTIGINGMLFNTNKEGTLAFYTP

▼ALLMOTIF▼
♠107x178x4♠
✣P6 & 23LZIPC✣
NDITLNNSVALD ✣PIDI ♠SIELN ▼KAKSDLEESKEWI✣ RRSNQKL✣

♦Transmembrane Region♦
DSIGNWHQSSTT ♦IIIV♠ LIMIIILFIINVTII♦ IIAVKYY▼ R

IQKRNRVDQN DKPYVLTNK

FIG. 25

Fusion
Peptide
.....GLFGAI AGFIENGWEGMIDGWYGFRHQNSEGTG

♠107x178x4♠
♥ALLMOTI5♥
LVS Coiled-Coil
*Q ♥AADLKST ♠QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQ

DLEKYVEDTKIDL* WSYNAELLVALENQHTI♠ DLT♥ DSEMNKLFEKTR

RQLRENAEEMGNGCFKIYHKCDNACIESIRNGTYDHDVYRDEALNNRFQIKG

VELKSGYKDWILWISFAISCFLLCVVLLGFIMWACQRGNIRCNICI

FIG. 26

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			Fusion Assay Purified IC50 (x+y) (ug/ml)	CD
RSV F2	T-142	AV	39	++
T-143	T-143	++	31	+++
T-144	T-144	+	114	++
T-145	T-145	++	40	+
T-146	T-146	-	281	-
T-147	T-147	-	204	-
T-148	T-148	-	354	-
T-149	T-149	-	336	-
T-150	T-150	-	342	+
T-151	T-151	+/-	116	+
T-152	T-152	+/-	117	++
T-153	T-153	-	280	+
T-154	T-154	+/-	118	++
T-155	T-155	-	253	+

FIG. 27A

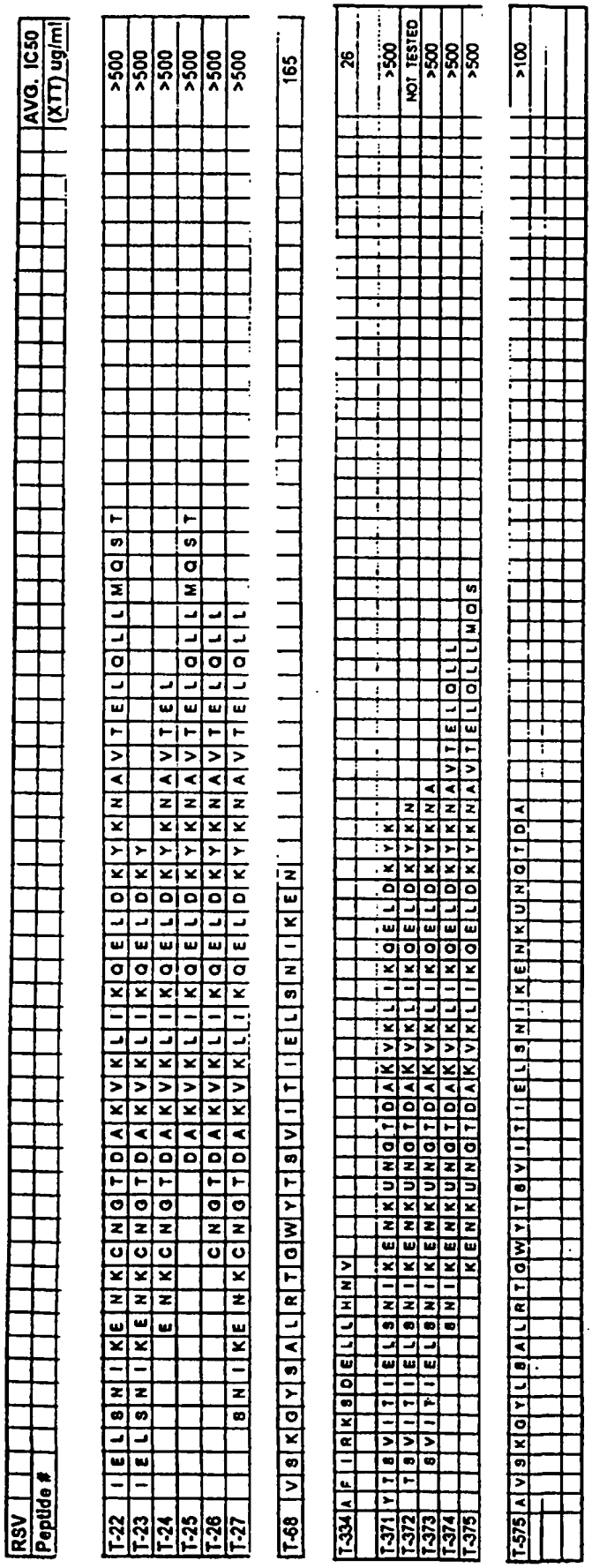

RSV
Peptide #
AVG. IC50
(XTT) ug/ml
T-22 >500
T-23 >500
T-24 >500
T-25 >500
T-26 >500
T-27 >500
T-68 165
T-334 26
T-371 >500
T-372 NOT TESTED
T-373 >500
T-374 >500
T-375 >500
T-575 >100

FIG. 27B

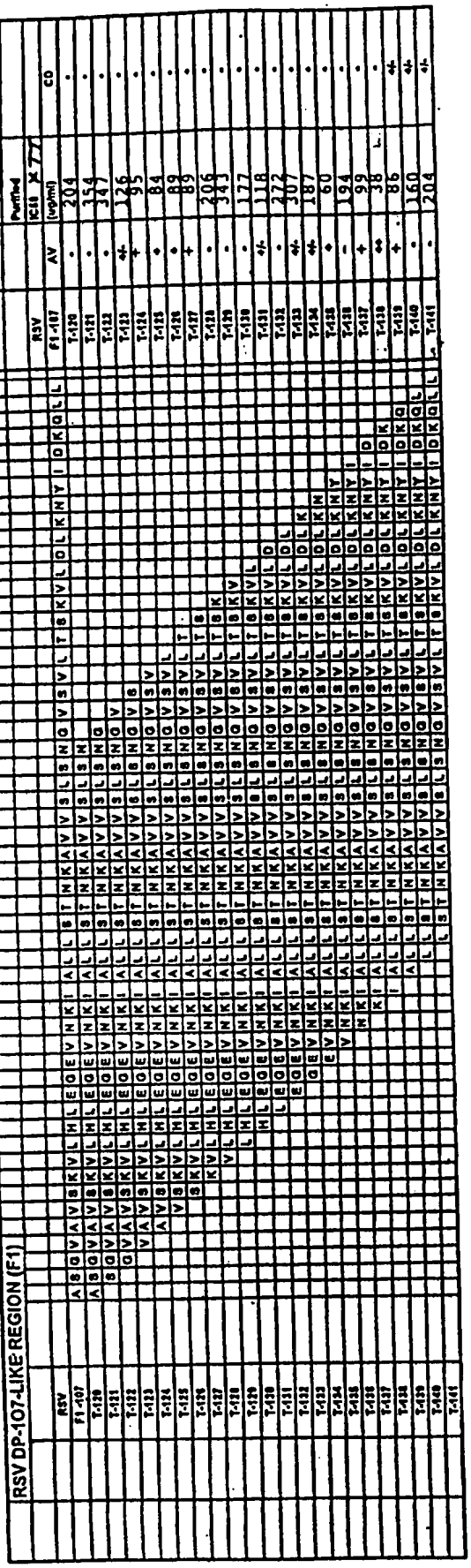

RSV DP-107-LIKE REGION (F1)
Fusion Assay
Purified
IC50 X 777
(ng/ml)
CD
RSV
F1-107
AV
T-120
T-121
T-122
T-123
T-124
T-125
T-126
T-127
T-128
T-129
T-130
T-131
T-132
T-133
T-134
T-135
T-136
T-137
T-138
T-139
T-140
T-141
204
354
347
126
95
84
89
206
343
177
118
272
307
187
60
194
99
38
86
160
204

FIG. 27 C

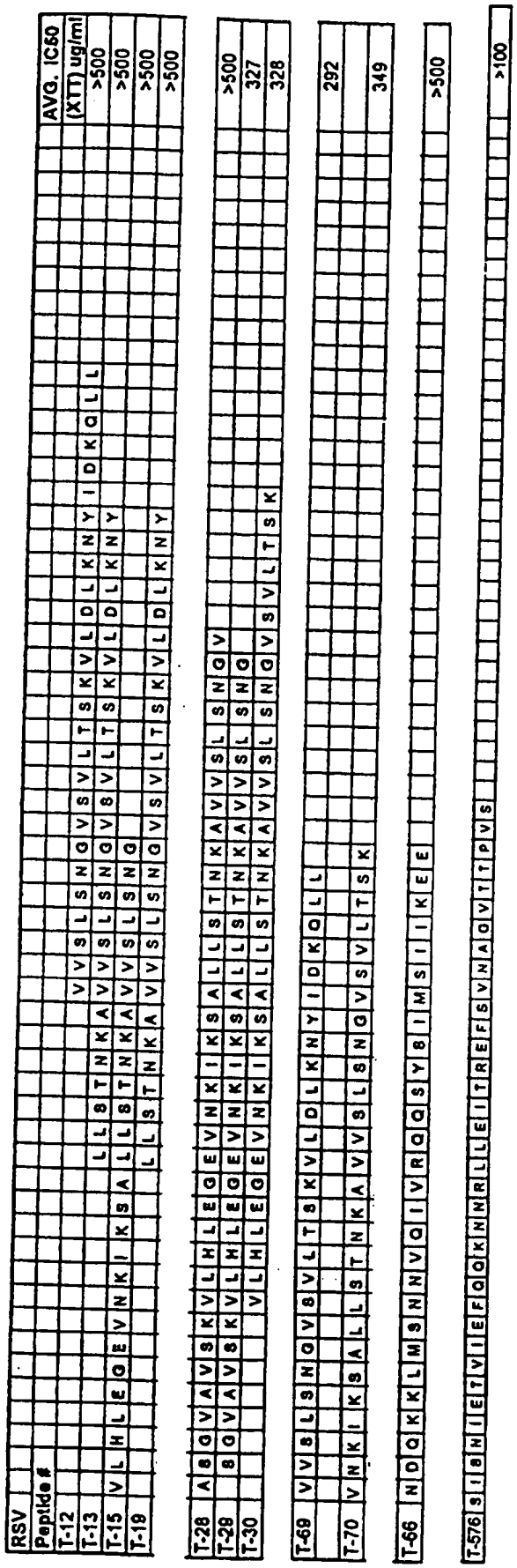

RSV
Peptide #
AVG. IC50
(XTT) ug/ml
T-12 VVSLLSNGVSVLTSKVLDLKNYIDKQLL >500
T-13 LLLSTNKAVVSLLSNGVSVLTSKVLDLKNY >500
T-15 VLHLEGEVNKIKSALLSTNKAVVSLLSNG >500
T-19 LLSTNKAVVSLLSNGVSVLTSKVLDLKNY >500
T-28 AEGVAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGV >500
T-29 EGVAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNG 327
T-30 VLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLTSK 328
T-69 VVSLSNGVSVLTSKVLDLKNYIDKQLL 292
T-70 VNKIKSALLSTNKAVVSLSNGVSVLTSK 349
T-66 NDQKKLMSNNVQIVRQQSYSIMSIIKEE >500
T-576 SISNHIIETVIIEFQQKNNRLLEIITREFSVNAGVTTPVS >100

FIG. 27D

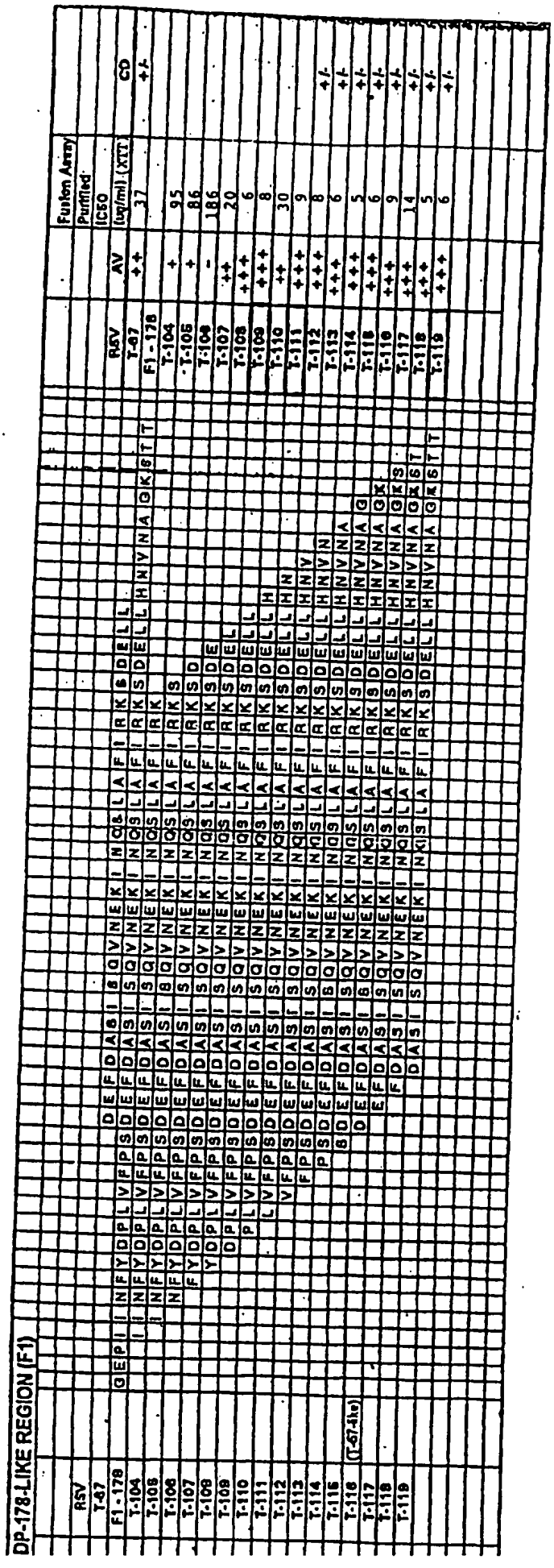

DP-178-LIKE REGION (F1)
RSV
T-67
F1-178
T-104
T-105
T-106
T-107
T-108
T-109
T-110
T-111
T-112
T-113
T-114
T-115
T-116
(T-67-like)
T-117
T-118
T-119
Fusion Assay
Purified
IC50
(ug/ml) (XTT)
RSV
AV
CD
T-67
++
37
+/-
F1-178
T-104
+
95
T-105
T-106
+
86
T-104
-
186
T-107
++
20
T-108
+++
6
T-109
+++
8
T-110
++
30
T-111
+++
9
T-112
+++
8
T-113
+++
6
+/-
T-114
+++
5
+/-
T-118
+++
6
+/-
T-116
+++
9
+/-
T-117
+++
14
+/-
T-118
+++
5
+/-
T-119
+++
6
+/-

FIG. 28A

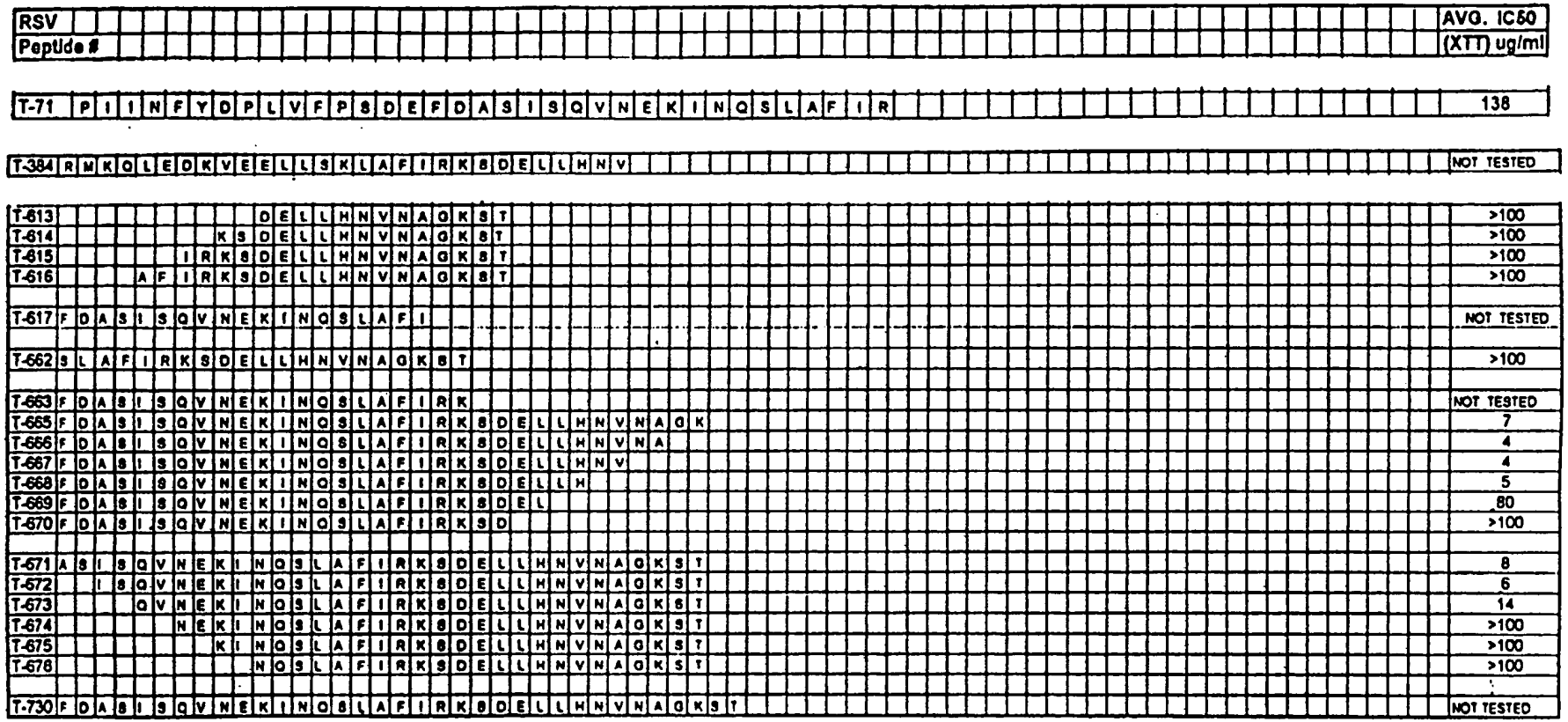


FIG. 28 B

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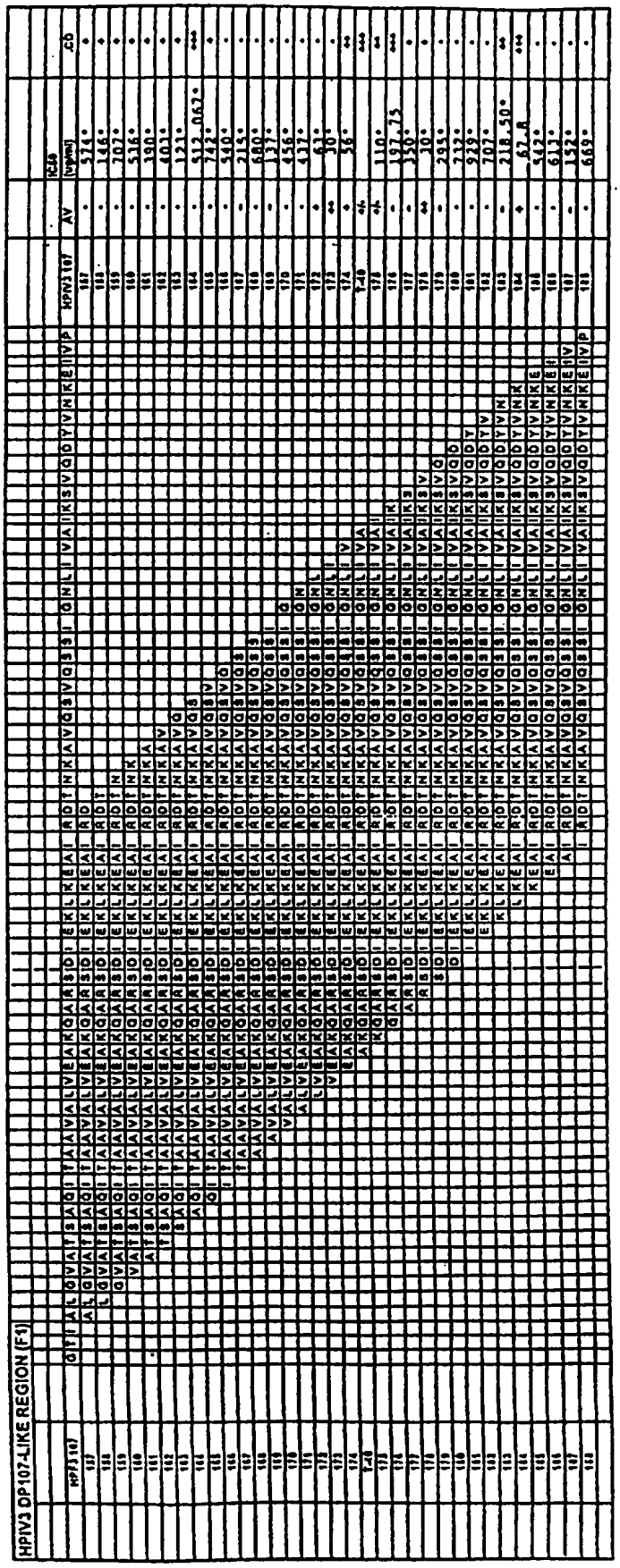
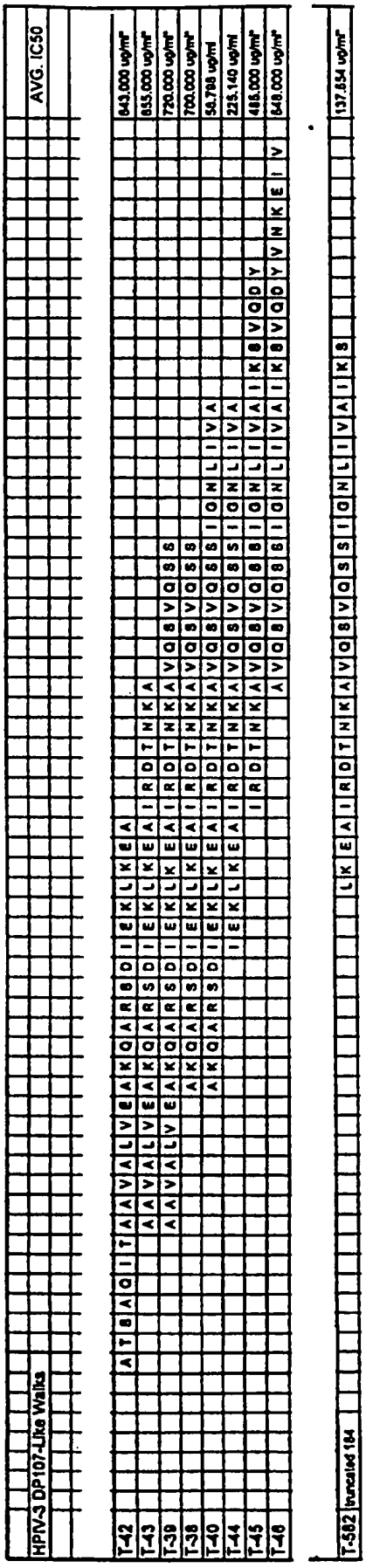


FIG. 29A


HPIV-3 DP107-Like Walks
AVG. IC50
T-42
T-43
T-39
T-38
T-40
T-44
T-45
T-46
T-582 truncated 184
843.000 ug/ml*
855.000 ug/ml*
720.000 ug/ml*
700.000 ug/ml*
58.788 ug/ml
225.140 ug/ml
488.000 ug/ml*
648.000 ug/ml*
137.854 ug/ml*

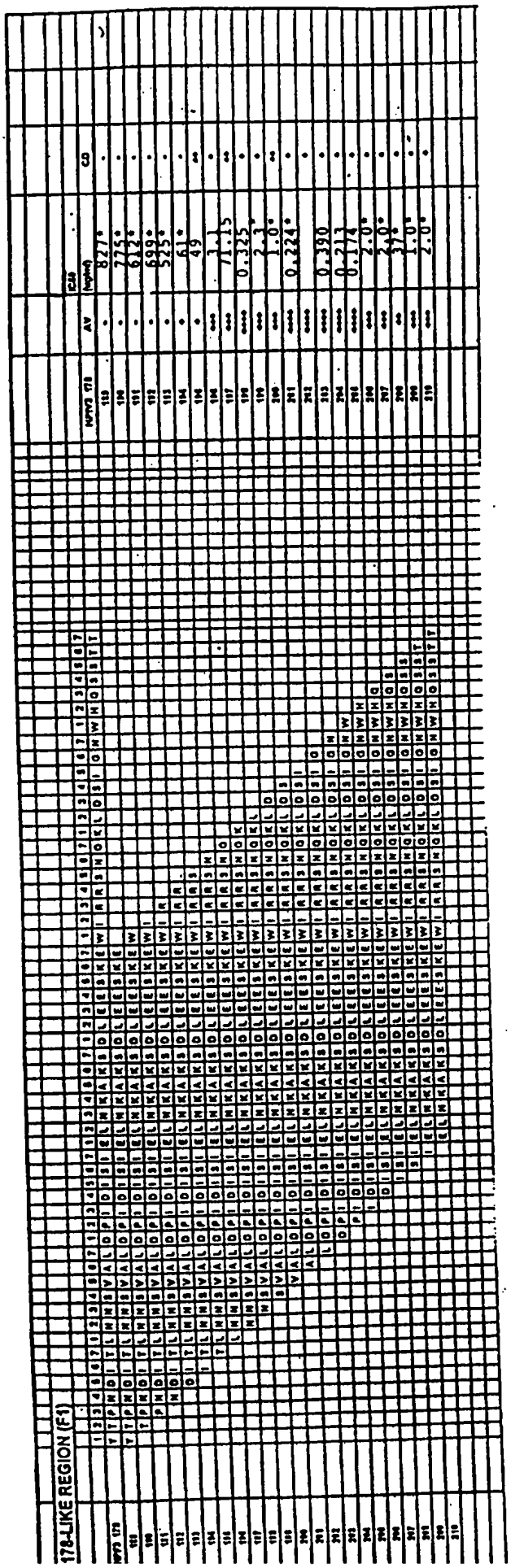


FIG. 30A

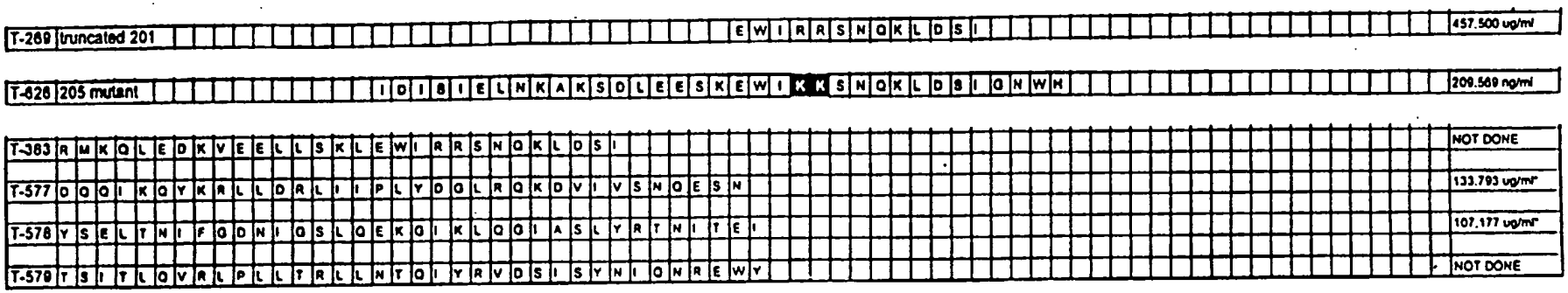

T-269 truncated 201
457.500 ug/ml
T-626 205 mutant
209.569 ng/ml
T-383
NOT DONE
T-577
133.793 ug/ml
T-578
107.177 ug/ml
T-579
NOT DONE

FIG. 30 B

Fusion Peptide ♥ALLMOTI5♥
♠107x178x4♠
.....RNKRGVFVLGFLGFLATAGSAMGAAS ♠♥ XXXXAQSRTLLAGIVQQQQQ

LLDVVKRQQELLRLTVWGTKNLQTRVTAIEKYLKDQAQL♠NAWG♥ CAF

♥ALLMOTI5♥
*LVS Predicted Coiled -Coil
RQVCHTTVPWPNASLTPDW *NND ♥TWQEWERKVDFLEENITALLEEAQIQQ

♠107x178x4♠
EKNMY ♠ELQKLNSWD* VF♥ GNXXXXXXXXXXXXXXXXXXXXXXXXXXX♠

IYIVMLAKLRQGYRPVFSSPPSYFQXTHTQQDPALPTREGKEGDGGEGGGNSSWP

WQIEYIHF

FIG. 31

MTRRRVLSVVVLLAALACRLGAQTPEQPAPPATTVQPTATRQQTSFPFRVCELSSHGDLFRFSSD

♠107x178x4♠

IQCPSFGTRENHTEGLLMVFKDNIIPYSF ♠KVRSYTKIVTNILIYNGWYADSVTNRHE♠

EKFSVDSY ETDQMDTIYQ CYNAVKMTKD GLTRVYVDRD GVNITVNLKP TGGLANGVRR

YASQTELYDA PGWLIWTYRT RTTVNCLITD MMAKSNSPFD FFVTTTGQTV EMSPFYDGKN

KETFHERADS FHVRTNYKIV DYDNRGTNPQ GERRAFLDKG TYTLSWKLEN RTAYCPLQHW

QTFDSTIATE TGKSIHFVTD EGTSSFVTNT TVGIELPDAF KCIEEQVNKT HEKYEAVQD

RYTKGQEAIT YFITSGGLLL AWLPLTPRSL ATVKNLTELT TPTSSPPSSP SPPAPSAARG

STPAAVLRRR RRDAGNATTP VPPTAPGKSL GTLNNPATVQ IQFAYDSLRR QINRMLGDLA

RAWCLEQKRQ NMVLRELTKI NPTTVMSSIY GKAVAAKRLG DVISVSQCVP VNQATVTLRK

SMRVPGSETM CYSRPLVSFS FINDTKTYEG QLGTDNEIFL TKKMTEVCQA TSQYYFQSGN

♠107x178x4♠

EIHVYNDYHH FKTIELDGIA TLQTFISLNT ♠SLIENIDFASLELYSRDEQRASNVFD *LE♠

LVS Predicted Coiled Coil

TM Potential

GIFREYNFQAQNIAGLRKDLDNAVSN* GRNQ **FVDGLGELMDSLGSVG** QSITN

♣P12LZIPC♣

TM Potential **TM Potential**

LVSTVGGLFSSLVSGFISF FK N ♣**PFGGMLILVLVAGVVILVISL**♣ TRRTRQMS

QQPVQMLYPG IDELAQQHAS GEGPGINPIS KTELQAIMLA LHEQNQEQKR AAQRAAGPSV

ASRALQAARDRFPGLRRRRY HDPETAAALL GEAETEF

FIG. 32

MMDPNSTSED VKFTPDPYQV PFVQAFDQAT RVYQDLGGPS QAPLPCVLWP VLPEPLPQGQ

LTAYHVSTAP TGSWFSAPQP APENAYQAYA APQLFPVSDI TQNQQTNQAG GEAPQPGDNS

TVQTAAAVVF ACPGANQGQQ LADIGVPQPA PVAAPARRTR KPQQPESLEE CDSELEI

@DNA Binding@ ♠107x178x4♠ +Dimerization+
@KRY KNRVASRKCRAK ♠FK@ Q +LLQHYREVAAAKSSENDRLRLLLKQ♠

MCPSLDVD+ SI IPRTPDVLHE DLLNF

FIG. 33

Fusion Peptide FAG

♥ALLMOTI5♥ *LVS Coiled-Coil*
♥VVLAGAALGVATAAQITAGIALHQSML*NSQAIDNLRASLETTN

QAIEAIRQAGQEMI*LAVQGVQDYINN♥ ELIPSMNQLSCDLIGQKLGLKLLRYYT

♣P23LZIPC♣
♣P6,12LZIPC♣
♠107x178x4♠
♥ALLMOTI5♥
EILSLFGPSLRD ♣PISA ♠♥EISIQALSYALGGDINKV♣ LEKLGYSGGDL♣

♣P1,12LZIPC♣
LGILES♠ RGIKARI♥ THVDTESYFIVLSIAY ♣PTLSEIKGVIVHRLEGV♣ SY

NIGSQEWYTTVPKYVATQGYLISNFDESSCTFMPEGTVCSQNALYPMSPLLQECL

RGSTKSCARTLVSGSFGNRFILSQGNLIANCASILCKCYTTGTIINQDPDKILTYIAA

♣P23LZIPC♣
♣P12LZIPC♣
♥ALLMOTI5♥
LVS Coiled-Coil
DHCPVVEVNGVTIQVGSRRYPDAVYLHRIDLGP ♣P ♥IS*LERLDVGTNLGN

♦Transmembrane Region♦
AIAKLEDAKELL♣ ESSDQI*L♣ RSMK ♦GLSSTSIVYILI♥ AVCLGGLIGIP

ALICCC♦ RGRCNKKGEQVGMSRPGLKPDLTGTSKSYVRSL

FIG. 34

Pre S1 and Pre S2

MGQNLSTSNPLGFFPDHQLDPAFRANTANPDWDFNPNKDTWPDANKVGAGAFG

LGFTPPHGGLLGWSPQAQGILQTLPANPPPASTNRQSGRQPTPLSPPLRNTHPQAM

QWNSTTFHQTLQDPRVRGLYFPAGGSSSGTVNPVLTTASPLSSIFSRIGDPALN

Major Surface Antigen (HBs)

Fusion
Peptide

∔P12 & 23LZIPC∔

MENITSG FLG ∔PLL VLQAGFFLLTRILTI∔ PQSLDSWWTSLNFLGGTTVCLG

∔P12 & 23LZIPC∔

QNSQSPTSNHSPTSCPPTC ∔PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML∔

PVCPLIPGSSTTSTGPCRTCMTTAQGTSMYPSCCCTKPSDGNCTCIPIPSSWAFGKF

♦Transmembrane Region♦

LWEWASARFSWLS ♦LLVPFVQWFVGLSPTVWLSVI♦ WMMWYWGPSL

♦Transmembrane Region♦

♦YSILSPFLPLLPIFFCLWVYI♦

FIG. 35

Fusion ♥ALLMOTI5♥ ♠107x178x4♠
Peptide *LVS Coiled Coil
AIQLIPLFVG LGI ♥TTAVSTGAAGLGVS ♠IT *QYTKLSHQLISDV

QAISSTIQDLQDQVDSLAEVVLQ* NRRGLDLLTAE♠ QGGI♥

CLALQEKCCFYANKSGIVRDKIKNLQDDLERRRRQLIDNPFWTSFHG

FLPYVMPLLGPLLCLLLVLSFGPIIFNKLMTFIKHQIESIQAKPIQVHYH

Transmembrane Region

RLEQEDSGGSYLTLT.....??????????????????????????.....

FIG 36

MKAQKGFTLI ELMIVVAIIG ILAAIAIPQ

♠107x178x4♠
♥ALLMOTI5♥
♠♥YQDYTARTQVTRAVSEVSALKTAAESAILEGKEIVSSA♠ T♥

PK DTQYDIGFT

♠107x178x4♠
♥ALLMOTI5♥
♠♥ESTLLDGSGKSQIQVTDNQDGTVELVATLGKSSGS♠AIKGAVITVSR♥

KNDGV WNCKITKTPT AWKPNYAPAN CPKS

FIG. 37

MNTLQKGFTL IELMIVIAIV GILAAVALPA YQDYTARAQV

SEAILLAEGQ KSAVTEYYLN HGIWP

♠107x178x4♠
♥ALLMOTI5♥
♠♥KDNTSAGVASSSSIKGKYVKEVKVENGVVTAT♠

MNSSNVNKEIQGKKLSLWAKRQDGSVKW♥

FCGQP VTRNAKDDTV TADATGNDGK IDTKHLPSTC RDNFDAS

FIG. 38

MKKTLLGSLI LLAFAGNVQA DINTETSGKV TFFGKVVENT

CKVKTEHKNL SVVLNDVGKN SLSTKVNTAM PTPFTITLQN

CDPTTANGTA NKANKVGLYF Y

♠107x178x4♠
♥ALLMOTI5♥
♠♥SWKNVDKENNFTLKNEQTTADYATNVNI♠

QLMESNGTKAISVVGKETE♥

DF MHTNNNGVAL NQTHPNNAHI SGSTQLTTGT NELPLHFIAQ

YYATNKATAG KVQSSVDFQI AYE

FIG. 39

MNKKLLMNFF IVSPLLLATT ATDFTPVP

♠107x178x4♠
♥ALLMOTI5♥
♠♥LSSNQIIKTAKASTNDNIKDLLDWYSSGSDTFTNS♠♥

EVLDNSL GSMRIKNTDG SISLIIFPSP YYSPAFTKGE KV

♠107x178x4♠
♠DLNTKRTKKSQHTSEGTYIHFQISGVT♠

N TEKLPTPIEL PLKVKVHGKD SPLKYG

♣P12LZIPC♣
♣PKFDKKQLAISTLDFEIRHQLTQI♣

HGLYRSSDKT GGYWKITMND GSTYQSDLSK KFEYNTEKPP

INIDEIKTIE AEIN

FIG. 40

♥ALLMOTI5♥
MKKTAFILLL FIALTLTTSP L ♥VNG

♠107x178x4♠
LVS Predicted Coiled-Coil
S ♠EKSEEINEKDLRKKSELQRNALSNLRQIY YYNEKAITENKESDD♠

QFLENTLL♥ FKG FFTGHPW

♠107x178x4♠
♠YNDLLVDLGSKDATNKYKGKKVDLYGAY♠

YGYQCAGGTPNKTACMYGGVTLHDN NRLTEEKKVP INLWIDGKQTTV

♣P12LZIPC♣
♣PIDKVKTSKKEVTVQELDL♣ QARHYLHGK FGLYNSDSFGGKVQ

♣P12LZIPC♣
RGLIVF HSSEGSTVSY DLFDAQGQY ♣P DTLLRIYRDN KTINSENLHI♣

DLYLYTT

FIG. 41

♥ALLMOTI5♥
MKKTAFTLLL FIALTLTTSP L ♥VNGS

♠107x178x4♠
♠EKSEEINEKDLRKKSELQGTALGNLKQIYYYNEKAKTENKESHD♠ Q♥

FLQHTILFKG FFTDHSWYND LLVDFDSKDI VDKYKGKKVDLYGAYY

GYQC AGGTPNKTAC MYGGVTLHDN NRLTEEKKVPINLWLDGKQNTV

♠107x178x4♠
♥ALLMOTI5♥
♣P12LZIPC♣
♣P ♥L ♠ETVKTNKKNVTVQELDLQARRYL♣ QEKYNLYN♠

SDVFDGKVQR♥ GLIVF HTSTE

♣P23LZIPC♣
♣PSVNYDLFGAQGQYSNTLLRIYRDNKTINSENMHI♣ DIYLYTS

FIG. 42

MKNITFIFFILLASPLYANGDRLYRADSRPPDEIKRFRSLMPRGNEYFDRGT

♥ALLMOTI5♥
♥QMNINLYDHARGTQTGFVRYDDGYV

♠107x178x4♠
♠STSLSLRSAHLAGQYILSGYSLTIYIVI♠ ANMFNVNDVISVY♥

SP HPYEQEVSAL GGIPYSQIYG WYRVNFGVID ERLHRNREYR

DRYYRNLNIA PAEDGYRLAG FPPDHQAWRE EPWIHHAPQG

CGDSSRTITG DTCNE

♥ALLMOTI5♥
♥ETQNLSTIYLREYQSKVKRQIFSDYQSEVDIYNRIRDEL♥

FIG. 43

MMFSGFNADY EASSSRCSSA SPAGDSLSYY HSPADSFSSM

GSPVNAQDFC TDLAVSSANF IPTVTAISTS PDLQWLVQPA

LVSSVAPSQT RAPHPFGVPA PSAGAYSRAG VVKTMTGGRA

LVS Predicted Coiled-Coil

QSIGRRGKVE QLSPEEEEKR RIRRE *RNKMA AAK

♠107x178x4♠

♥ALLMOTI5♥

♥CRNRRREL ♠TDTLQAETDQLEDEKSALQTEIANLLKEKEKL♥

EFILAAH R* PACKIPDDL GFPEEMSVAS LDLTGGLPEV

ATPESEEAFT LPLLNDPEPK PSVEPVKSIS SMELKTEPFD

DFLFPASSRP SGSETARSVP DMDLSGSFYA LPLLNDPEPK

PSVEPVKSIS SMELKTEPFD DFLFPASSRP SGSETARSVP

DMDLSGSFYA GSSSNEPSSD SLSSPTLLAL

FIG. 44

SGWESYYKTEGDEEAEEEQEENLEASGDYKYSGRDSLIFLVDASKA

MFESQSEDELTPFDMSIQCIQSVYISKIISSDRDLLAVVFYGTEKDKNS

VNFKNIYVLQELDNPGAKRILELDQFKGQQGQKRFQDMMGHGSDY

SLSEVLWVCANLFSDVQFKMSHKRIMLFTNEDNPHGNDSAKASRAR

TKAGDLRDTGIFLDLMHLKKPGGFDISLFYRDIISIAEDED

♠107x178x4♠
♥ALLMOTI5♥
LVS Predicted Coiled-Coil

♥LRVH *FEE ♠SSKLEDLLRKVRAKETRKRALSRLKLKLNKDIV* ISV

GIYNLVQKAL♥ KPPPIKLYRETN♠ EPVKTKTRTFNTSTGGLLLPSDTKR

SQIYGSRQIILEKEETEELKRFDDPGLMLMGFKPLVLLKKHHLRPSLFVYPE
ESLVIGSSTLFSALLIKCLEKEVAALCRYTPRRNIPPYFVALVPQEEELDDQK
IQVTPPGFQLVFLPFADDKRKMPFTEKIMATPEQVGKMKAIVEKLRFTYRS
DSFENPVLQQHFRNLEALALDLME

♣P12LZIPC♣
♣PEQAVDLTLPKVEAMNKRL♣ GSLVDEFKELVYPPDYNPEGKVTKR
KHDNEGSGSKRPKVEYSEEELKTHISKGTLGKFTVPMLKEACRAYGLKSG

LKKQELLEALTKHFQD

FIG. 45

GGGALSPQHSAVTQGSIIKNKEGMDAKS

♠107x178x4♠
♥ALLMOTI5♥
♥♠LTAWSRTLVTFKDVFVDFTREEWKLLDT♠ AQQIVYRNV
MLENYKNLVSLGYQLT♥ KPDVILRLEKGEEPWLVEREIHQETHPD
SETAFEIKSSVSSRSIFKDKQSCDIKMEGMARNDLWYLSLEEVWKCR
DQLDKYQENPERHLRHQLIHTGEKPYECKECGKSFSRSSHLIGHQKT
HTGEEPYECKECGKSFSWFSHLVTHQRTHTGDKLYTCNQCGKSFVH
SSRLIRHQRTHTGHKPYECPECGKSFRQSTHLILHQRTHVRVRPYECN
ECGKSYSQRSHLVVHHRIHTGLKPFECKDCGKCFSRSSHLYSHQRTH
TGEKPYECHDCGKSFSQSSALIVHQRIHTGEKPYECCQCGKAFIRKN
DLIKHQRIHVGAETYKCNQCGIIFSQNS

♣P23LZIPC♣
♣PFIVHQIAHTGEQFLTCNQCGTALVNTSNLIGYQTNHI♣ RENAY

FIG. 46

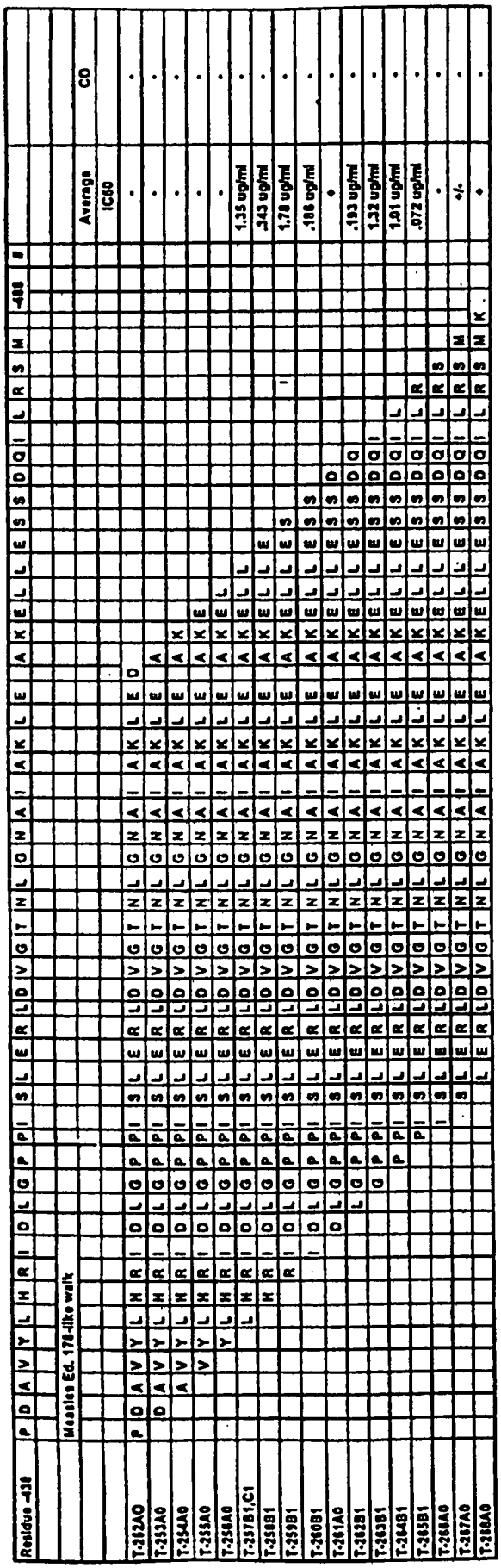

Residue 438
Measles Ed. 1784like walk
Average
CD
IC50
T-252A0
T-253A0
T-254A0
T-255A0
T-256A0
T-257B1,C1
T-258B1
T-259B1
T-260B1
T-261A0
T-262B1
T-263B1
T-264B1
T-265B1
T-266A0
T-267A0
T-268A0
1.35 ug/ml
.343 ug/ml
1.78 ug/ml
.188 ug/ml
.193 ug/ml
1.32 ug/ml
1.01 ug/ml
.072 ug/ml
+/-

FIG. 47

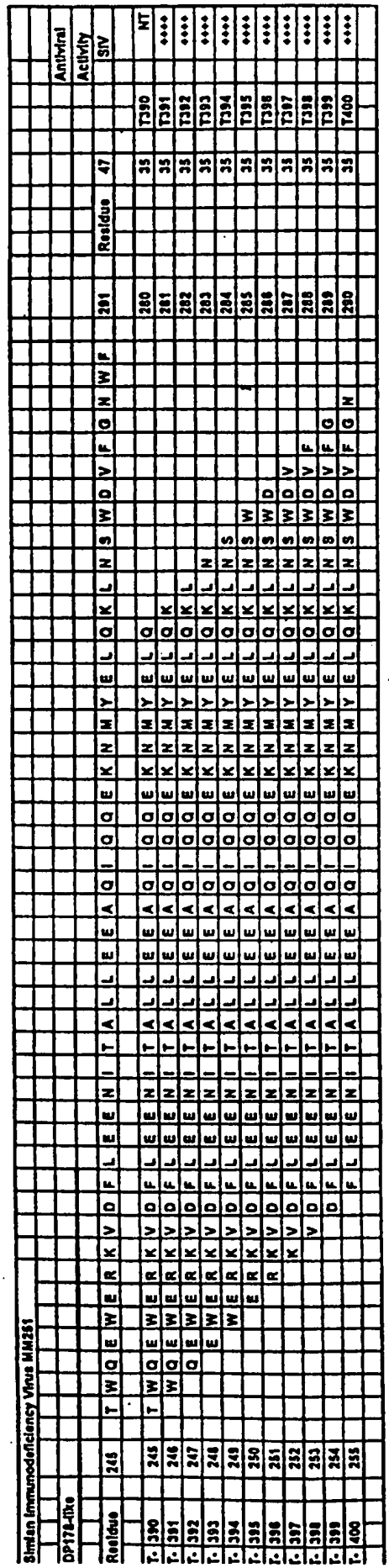

Simian Immunodeficiency Virus MM251
DP178-like
Residue
Residue 47
Antiviral Activity
SIV
T390
T391
T392
T393
T394
T395
T396
T397
T398
T399
T400
NT
++++

FIG. 48

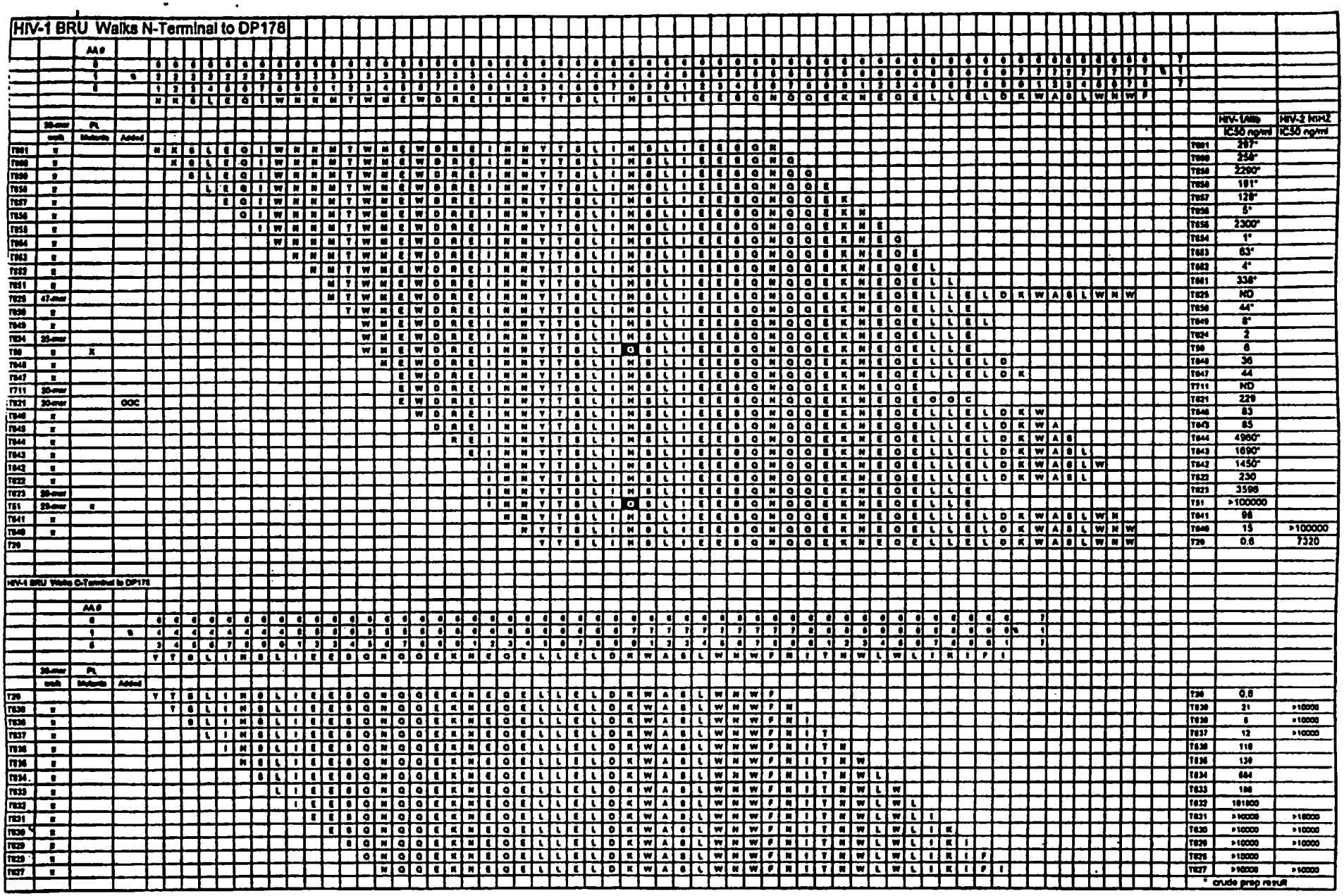

HIV-1 BRU Walks N-Terminal to DP178
HIV-1 BRU Walks C-Terminal to DP178
HIV-1/Mib IC50 ng/ml
HIV-2 NIH-Z IC50 ng/ml

FIG. 49A

HIV-1 Bru 178 Constructs, Mutations, Truncations
Truncation
PL
Mature
Added
Removed
HIV-1(Ab)
IC50 (ng/ml)
T1
T228
T700
T718
T6/7/718
T714
T712
T64
T63
T62
T3
T6/7/102
T217
T218
T219
T220
T221
T234
T235
T670
T241
T242
T677
T370
T248
T377
T380
T378
T381
T376
T371
T373
T604
T609
T610
T611
T613
T622
T623
T6/7/724
T228
T227

FIG. 493

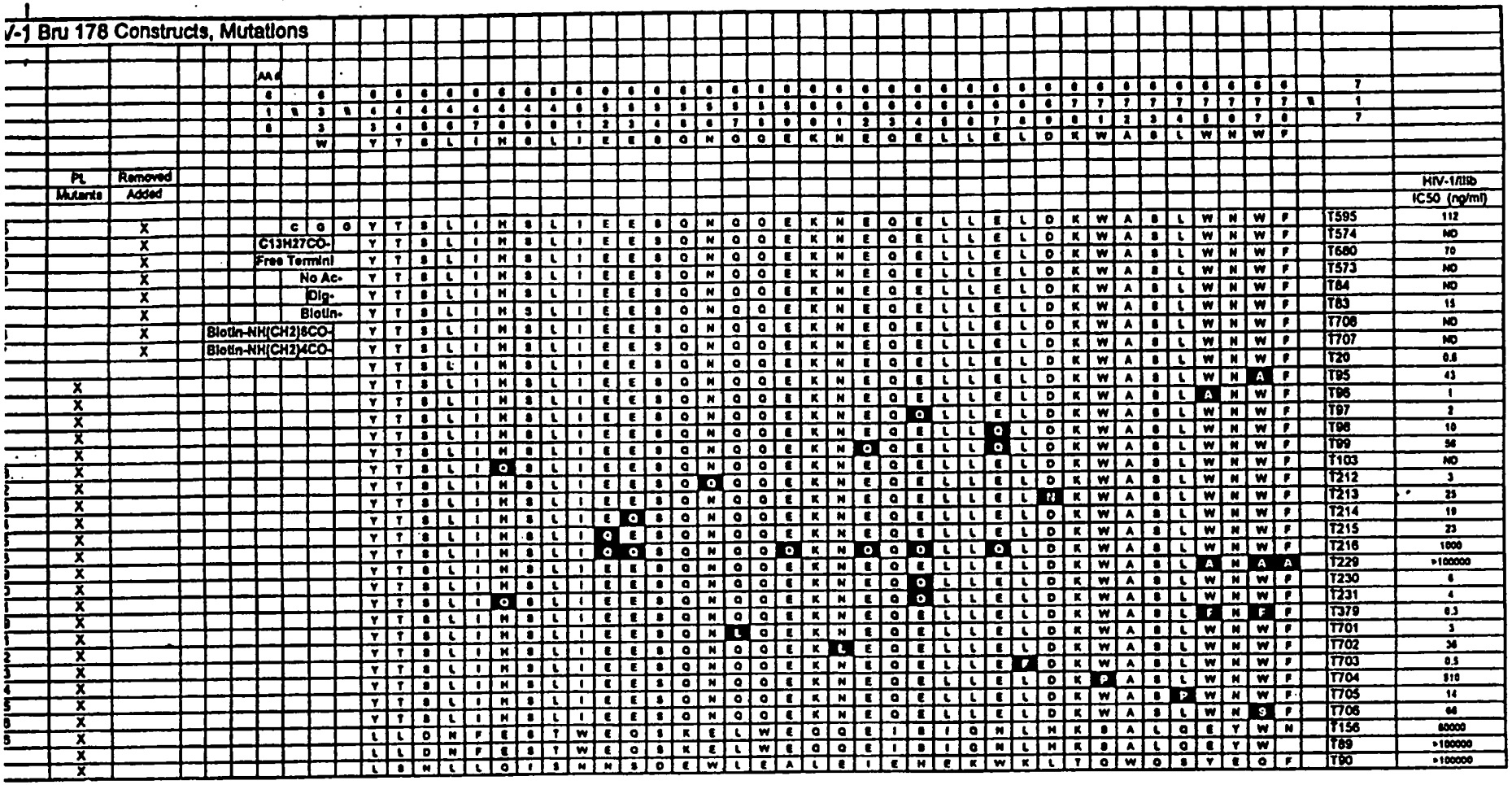
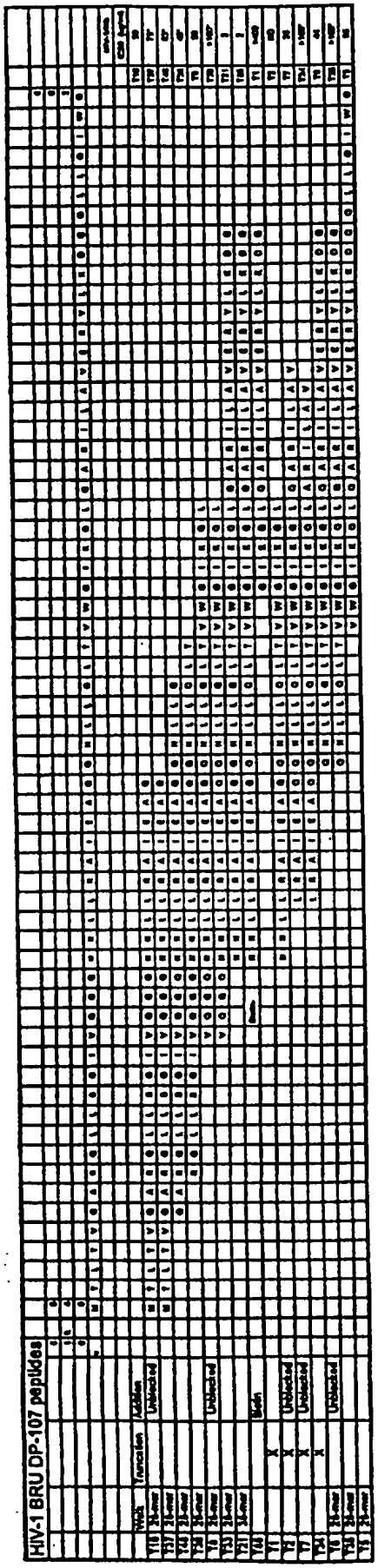
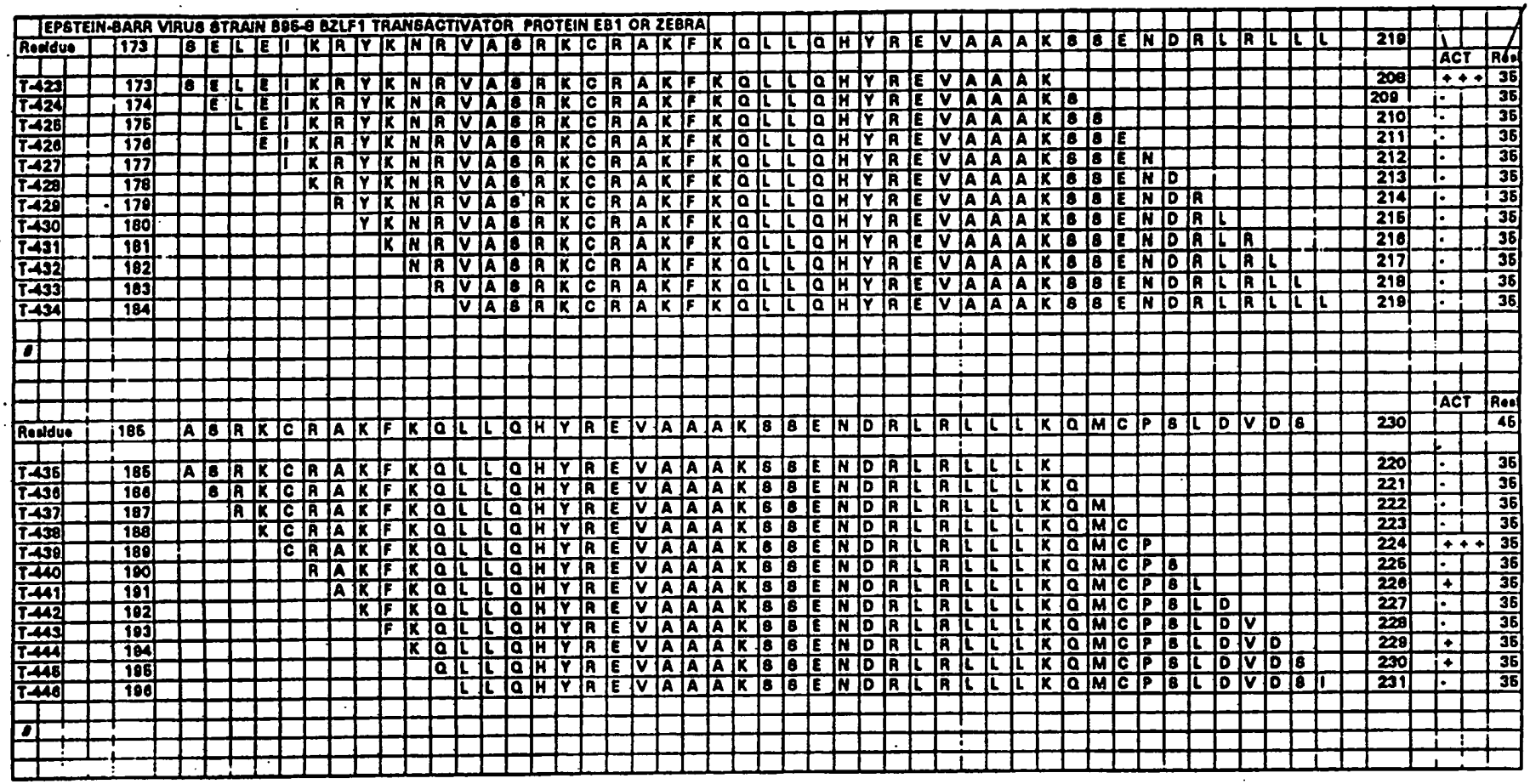


FIG. 49C

7872-020 (SHEET 56 OF 63)


HIV-1 BRU DP-107 peptides
Truncation
Addition
Unaltered
Mutation
Unaltered
Unaltered
Unaltered



| EPSTEIN-BARR VIRUS STRAIN B95-8 BZLF1 TRANSACTIVATOR PROTEIN EB1 OR ZEBRA | | |

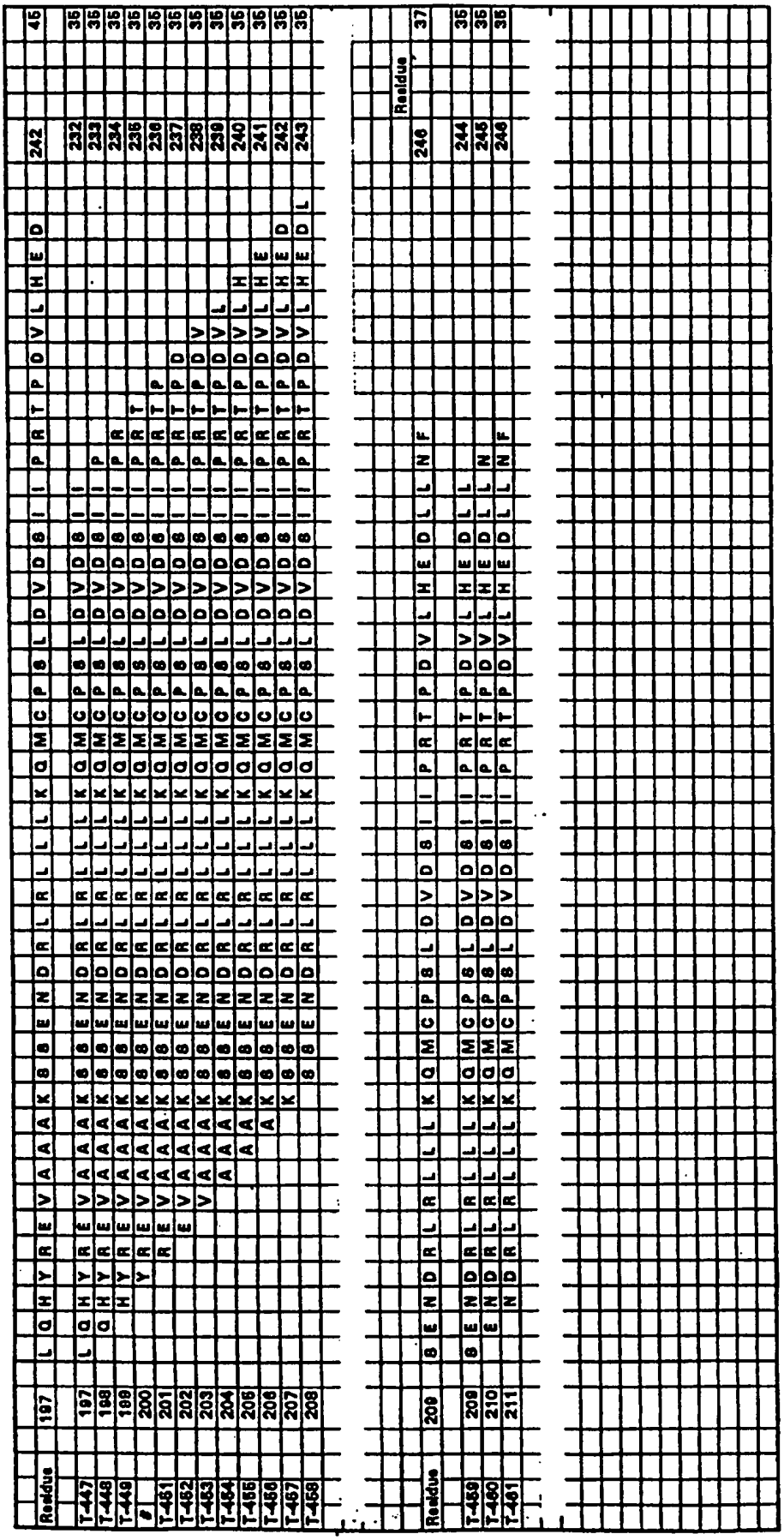


FIG. 51B

7872-020 (SHEET 62 OF 63)

Domain I:

$_{174}$P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-G-T-T-V-C-L-G-Q-N-S-Q-S-P$_{220}$

P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T
L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T
L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V
V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C
L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L
Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G
A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q
G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N
F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S
F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q
L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q-S

FIG. 52A

Domain II:

223P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-FI-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T291

P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L
G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P
Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V
R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C
W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P
M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L
C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I
L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P
R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G
R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S
F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S
I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T

I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S
F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T
L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G
F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P
I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C
L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R
L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T
L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C
C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M
L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T
I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T

FIG. 52B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/16733

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :C07K 7/04,14/025, 14/16; C12N 9/94, 9/96, 9/98, 9/99
US CL :530/324; 424/184.1
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/324, 325, 326, 327, 328, 329; 424/184.1, 185.1, 186.1, 187.1, 188.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE, AIDSLINE, APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 89, Number 21, issued November 1992, Wild et al, "A Synthetic Peptide Inhibitor of Human Immunodeficiency Virus Replication: Correlation Between Solution Structure and Viral Inhibition", pages 10537-41, see entire document.	1-3, 9, and 10 ---------- 4-8 and 11-15

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

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Date of the actual completion of the international search 28 MARCH 1996	Date of mailing of the international search report 09 APR 1996
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer JEFFREY STUCKER Telephone No. (703) 308-0196

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 91, Number 26, issued December 1994, Wild et al, "Propensity for a Leucine Zipper-Like Domain of Human Immunodeficiency Virus Type 1 gp41 to Form Oligomers Correlates With a Role in Virus-Induced Fusion Rather Than Assembly of the Glycoprotein Complex", pages 12676-80, see entire document.	1-3, 9 and 10 ---------- 4-8 and 11-15
X --------- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 81, Number 24, issued December 1984, Collins et al, "Nucleotide Sequence of the Gene Encoding the Fusion (F) Glycoprotein of Human Respiratory Syncytial Virus", pages 7683-87, see pages 7683 and 7685.	1 and 4 ---------- 9 and 11
X ----- Y	VIROLOGY, Volume 204, Number 2, issued 01 November 1994, Bousse et al, "Regions on the Hemagglutinin-Neuraminidase Proteins of Human Parainfluenza Virus Type-1 and Sendai Virus Important for Membrane Fusion", pages 506-514, see pages 506 and 510-513.	1 and 5 ---------- 9 and 12
X ----- Y	JOURNAL OF VIROLOGY, Volume 67, Number 9, issued September 1993, Wang et al, "Ion Channel Activity of Influenza A Virus M2 Protein: Characterization of the Amantidine Block", pages 5585-94, see pages 5585-86.	1 and 6 ---------- 9 and 13
X ----- Y	JOURNAL OF VIROLOGY, Volume 67, Number 5, issued May 1993, Lazinski et al, "Relating Structure to Function in the Hepatitis Delta Virus Antigen", pages 2672-80, see pages 2672-73 and 2678.	1 and 7 --------- 9 and 14
P, Y	JOURNAL OF EXPERIMENTAL MEDICINE, Volume 182, Number 2, issued August 1995, Suzuki et al, "Viral Interleukin 10 (IL-10), the Human Herpes Virus 4 Cellular IL-10 Homologue, Induces Local Anergy to Allogenic and Syngeneic Tumors", pages 477-486, see entire document.	1, 8, 9, and 15

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(71) Applicants: DUKE UNIVERSITY [US/US]; Erwin Road, Durham, NC 27706 (US). TRIMERIS INC. [US/US]; 4727 University Drive, Durham, NC 27707-3438 (US).

(72) Inventors: BOLOGNESI, Dani, P.; 17 Harvey Place, Durham, NC 27705 (US). MATTHEWS, Thomas, J.; 5906 Newhall Road, Durham, NC 27713 (US). WILD, Cart, T.; 1702 B Vista Street, Durham, NC 27701 (US). BARNEY, Shawn, O'Lin; 106 Branchway Road, Cary, NC 27502 (US). LAMBERT, Dennis, M.; 101 Centerville Court, Cary, NC 27513 (US). PETTEWAY, Stephen, R., Jr.; 203 Le Gault Drive, Cary, NC 27513 (US). LANGLOIS, Alphonse, J.; 1720 Vista Street, Durham, NC 27701 (US).

(74) Agents: CORUZZI, Laura, A. et al.; Pennie & Edmonds, 1155 Avenue of the Americas, New York, NY 10036 (US).

(54) Title: METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION

(57) Abstract

The present invention relates to peptides which exhibit potent anti-retroviral activity. The peptides of the invention comprise DP178 (SEQ ID:1) peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} gp41 protein, and fragments, analogs and homologs of DP178. The invention further relates to the uses of such peptides as inhibitory of human and non-human retroviral, especially HIV, transmission to uninfected cells.

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METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION

This is a Continuation-In-Part of Serial No. 08/360,107 filed December 20, 1994, which is a Continuation-In-Part of Serial No. 08/255,208 filed June 7, 1994, which is a Continuation-In-Part of Serial No. 08/073,028 filed June 7, 1993, each of which is incorporated herein by reference in its entirety. This invention was made with Government support under Grant No. AI-30411-02 awarded by the National Institutes of Health. The Government has certain rights in the invention.

1. INTRODUCTION

The present invention relates, first, to DP178 (SEQ ID NO:1), a peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} transmembrane protein (TM) gp41, and portions or analogs of DP178 (SEQ ID NO:1), which exhibit anti-membrane fusion capability, antiviral activity, such as the ability to inhibit HIV transmission to uninfected CD-4^+ cells, or an ability to modulate intracellular processes involving coiled-coil peptide structures. Further, the invention relates to the use of DP178 (SEQ ID NO:1) and DP178 portions and/or analogs as antifusogenic or antiviral compounds or as inhibitors of intracellular events involving coiled-coil peptide structures. The present invention also relates to peptides analogous to DP107 (SEQ ID NO:25), a peptide corresponding to amino acids 558 to 595 of the HIV-1_{LAI} transmembrane protein (TM) gp41, having amino acid sequences present in other viruses, such as enveloped viruses, and/or other organisms, and further relates to the uses of such peptides. These peptides exhibit anti-membrane fusion capability, antiviral activity, or the ability to

modulate intracellular processes involving coiled-coil peptide structures. The present invention additionally relates to methods for identifying compounds that disrupt the interaction between DP178 and DP107, and/or between DP107-like and DP178-like peptides. Further, the invention relates to the use of the peptides of the invention as diagnostic agents. For example, a DP178 peptide may be used as an HIV subtype-specific diagnostic. The invention is demonstrated, first, by way of an Example wherein DP178 (SEQ ID:1), and a peptide whose sequence is homologous to DP178 are each shown to be potent, non-cytotoxic inhibitors of HIV-1 transfer to uninfected CD-4$^+$ cells. The invention is further demonstrated by Examples wherein peptides having structural and/or amino acid motif similarity to DP107 and DP178 are identified in a variety of viral and nonviral organisms, and in examples wherein a number of such identified peptides derived from several different viral systems are demonstrated to exhibit antiviral activity.

2. BACKGROUND OF THE INVENTION

2.1 MEMBRANE FUSION EVENTS

Membrane fusion is a ubiquitous cell biological process (for a review, see White, J.M., 1992, Science 258:917-924). Fusion events which mediate cellular housekeeping functions, such as endocytosis, constitutive secretion, and recycling of membrane components, occur continuously in all eukaryotic cells.

Additional fusion events occur in specialized cells. Intracellularly, for example, fusion events are involved in such processes as occur in regulated exocytosis of hormones, enzymes and neurotransmitters.

Intercellularly, such fusion events feature prominently in, for example, sperm-egg fusion and myoblast fusion.

Fusion events are also associated with disease states. For example, fusion events are involved in the formation of giant cells during inflammatory reactions, the entry of all enveloped viruses into cells, and, in the case of human immunodeficiency virus (HIV), for example, are responsible for the virally induced cell-cell fusion which leads to cell death.

2.2. THE HUMAN IMMUNODEFICIENCY VIRUS

The human immunodeficiency virus (HIV) has been implicated as the primary cause of the slowly degenerative immune system disease termed acquired immune deficiency syndrome (AIDS) (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo, R. et al., 1984, Science 224:500-503). There are at least two distinct types of HIV: HIV-1 (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo R. et al., 1984, Science 224:500-503) and HIV-2 (Clavel, F. et al., 1986, Science 233:343-346; Guyader, M. et al., 1987, Nature 326:662-669). Further, a large amount of genetic heterogeneity exists within populations of each of these types. Infection of human CD-4$^+$ T-lymphocytes with an HIV virus leads to depletion of the cell type and eventually to opportunistic infections, neurological dysfunctions, neoplastic growth, and ultimately death.

HIV is a member of the lentivirus family of retroviruses (Teich, N. et al., 1984, RNA Tumor Viruses, Weiss, R. et al., eds., CSH-Press, pp. 949-956). Retroviruses are small enveloped viruses that contain a diploid, single-stranded RNA genome, and

replicate via a DNA intermediate produced by a virally-encoded reverse transcriptase, an RNA-dependent DNA polymerase (Varmus, H., 1988, Science 240:1427-1439). Other retroviruses include, for example, oncogenic viruses such as human T-cell leukemia viruses (HTLV-I,-II,-III), and feline leukemia virus.

The HIV viral particle consists of a viral core, composed of capsid proteins, that contains the viral RNA genome and those enzymes required for early replicative events. Myristylated Gag protein forms an outer viral shell around the viral core, which is, in turn, surrounded by a lipid membrane enveloped derived from the infected cell membrane. The HIV enveloped surface glycoproteins are synthesized as a single 160 Kd precursor protein which is cleaved by a cellular protease during viral budding into two glycoproteins, gp41 and gp120. gp41 is a transmembrane protein and gp120 is an extracellular protein which remains non-covalently associated with gp41, possibly in a trimeric or multimeric form (Hammarskjold, M. and Rekosh, D., 1989, Biochem. Biophys. Acta 989:269-280).

HIV is targeted to CD-4$^+$ cells because the CD-4 cell surface protein acts as the cellular receptor for the HIV-1 virus (Dalgleish, A. et al., 1984, Nature 312:763-767; Klatzmann et al., 1984, Nature 312:767-768; Maddon et al., 1986, Cell 47:333-348). Viral entry into cells is dependent upon gp120 binding the cellular CD-4$^+$ receptor molecules (McDougal, J.S. et al., 1986, Science 231:382-385; Maddon, P.J. et al., 1986, Cell 47:333-348) and thus explains HIV's tropism for CD-4$^+$ cells, while gp41 anchors the enveloped glycoprotein complex in the viral membrane.

2.3. HIV TREATMENT

HIV infection is pandemic and HIV associated diseases represent a major world health problem. Although considerable effort is being put into the successful design of effective therapeutics, currently no curative anti-retroviral drugs against AIDS exist. In attempts to develop such drugs, several stages of the HIV life cycle have been considered as targets for therapeutic intervention (Mitsuya, H. et al., 1991, FASEB J. 5:2369-2381). For example, virally encoded reverse transcriptase has been one focus of drug development. A number of reverse-transcriptase-targeted drugs, including 2',3'-dideoxynucleoside analogs such as AZT, ddI, ddC, and d4T have been developed which have been shown to been active against HIV (Mitsuya, H. et al., 1991, Science 249:1533-1544). While beneficial, these nucleoside analogs are not curative, probably due to the rapid appearance of drug resistant HIV mutants (Lander, B. et al., 1989, Science 243:1731-1734). In addition, the drugs often exhibit toxic side effects such as bone marrow suppression, vomiting, and liver function abnormalities.

Attempts are also being made to develop drugs which can inhibit viral entry into the cell, the earliest stage of HIV infection. Here, the focus has thus far been on CD4, the cell surface receptor for HIV. Recombinant soluble CD4, for example, has been shown to inhibit infection of CD-4$^+$ T-cells by some HIV-1 strains (Smith, D.H. et al., 1987, Science 238:1704-1707). Certain primary HIV-1 isolates, however, are relatively less sensitive to inhibition by recombinant CD-4 (Daar, E. et al., 1990, Proc. Natl. Acad. Sci. USA 87:6574-6579). In addition,

recombinant soluble CD-4 clinical trials have produced inconclusive results (Schooley, R. et al., 1990, Ann. Int. Med. 112:247-253; Kahn, J.O. et al., 1990, Ann. Int. Med. 112:254-261; Yarchoan, R. et al., 1989, Proc. Vth Int. Conf. on AIDS, p. 564, MCP 137).

The late stages of HIV replication, which involve crucial virus-specific secondary processing of certain viral proteins, have also been suggested as possible anti-HIV drug targets. Late stage processing is dependent on the activity of a viral protease, and drugs are being developed which inhibit this protease (Erickson, J., 1990, Science 249:527-533). The clinical outcome of these candidate drugs is still in question.

Attention is also being given to the development of vaccines for the treatment of HIV infection. The HIV-1 enveloped proteins (gp160, gp120, gp41) have been shown to be the major antigens for anti-HIV antibodies present in AIDS patients (Barin, et al., 1985, Science 228:1094-1096). Thus far, therefore, these proteins seem to be the most promising candidates to act as antigens for anti-HIV vaccine development. To this end, several groups have begun to use various portions of gp160, gp120, and/or gp41 as immunogenic targets for the host immune system. See for example, Ivanoff, L. et al., U.S. Pat. No. 5,141,867; Saith, G. et al., WO 92/22,654; Shafferman, A., WO 91/09,872; Formoso, C. et al., WO 90/07,119. Clinical results concerning these candidate vaccines, however, still remain far in the future.

Thus, although a great deal of effort is being directed to the design and testing of anti-retroviral drugs, a truly effective, non-toxic treatment is still needed.

3. SUMMARY OF THE INVENTION

The present invention relates, first, to DP178 (SEQ ID:1), a 36-amino acid synthetic peptide corresponding to amino acids 638 to 673 of the transmembrane protein (TM) gp41 from the HIV-1 isolate LAI (HIV-1_{LAI}), which exhibits potent anti-HIV-1 activity. As evidenced by the Example presented below, in Section 6, the DP178 (SEQ ID:1) antiviral activity is so high that, on a weight basis, no other known anti-HIV agent is effective at concentrations as low as those at which DP178 (SEQ ID:1) exhibits its inhibitory effects.

The invention further relates to those portions and analogs of DP178 which also show such antiviral activity, and/or show anti-membrane fusion capability, or an ability to modulate intracellular processes involving coiled-coil peptide structures. The term "DP178 analog" refers to a peptide which contains an amino acid sequence corresponding to the DP178 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and/or organisms other than HIV-1_{LAI}. Such DP178 analog peptides may, therefore, correspond to DP178-like amino acid sequences present in other viruses, such as, for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such analogous DP178 peptides may also correspond to DP178-like amino acid sequences present in nonviral organisms.

The invention further relates to peptides DP107 (SEQ ID NO:25) analogs. DP107 is a peptide corresponding to amino acids 558-595 of the HIV-1_{LAI} transmembrane protein (TM) gp41. The term "DP107 analog" as used herein refers to a peptide which contains an amino acid sequence corresponding to the

DP107 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and organisms other than HIV-1_{LAI}. Such DP107 analog peptides may, therefore, correspond to DP107-like amino acid sequences present in other viruses, such as, for for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such DP107 analog peptides may also correspond to DP107-like amino acid sequences present in nonviral organisms.

Further, the peptides of the invention include DP107 analog and DP178 analog peptides having amino acid sequences recognized or identified by the 107x178x4, ALLMOTI5 and/or PLZIP search motifs described herein.

The peptides of the invention may, for example, exhibit antifusogenic activity, antiviral activity, and/or may have the ability to modulate intracellular processes which involve coiled-coil peptide structures. With respect to the antiviral activity of the peptides of the invention, such an antiviral activity includes, but is not limited to the inhibition of HIV transmission to uninfected CD-4^+ cells. Additionally, the antifusogenic capability, antiviral activity or intracellular modulatory activity of the peptides of the invention merely requires the presence of the peptides of the invention, and, specifically, does not require the stimulation of a host immune response directed against such peptides.

The peptides of the invention may be used, for example, as inhibitors of membrane fusion-asociated events, such as, for example, the inhibition of human and non-human retroviral, especially HIV, transmission to uninfected cells. It is further contemplated that

the peptides of the invention may be used as modulators of intracellular events involving coiled-coil peptide structures.

The peptides of the invention may, alternatively, be used to identify compounds which may themselves exhibit antifusogenic, antiviral, or intracellular modulatory activity. Additional uses include, for example, the use of the peptides of the invention as organism or viral type and/or subtype-specific diagnostic tools.

The terms "antifusogenic" and "anti-membrane fusion", as used herein, refer to an agent's ability to inhibit or reduce the level of membrane fusion events between two or more moieties relative to the level of membrane fusion which occurs between said moieties in the absence of the peptide. The moieties may be, for example, cell membranes or viral structures, such as viral envelopes or pili. The term "antiviral", as used herein, refers to the compound's ability to inhibit viral infection of cells, via, for example, cell-cell fusion or free virus infection. Such infection may involve membrane fusion, as occurs in the case of enveloped viruses, or some other fusion event involving a viral structure and a cellular structure (e.g., such as the fusion of a viral pilus and bacterial membrane during bacterial conjugation).

It is also contemplated that the peptides of the invention may exhibit the ability to modulate intracellular events involving coiled-coil peptide structures. "Modulate", as used herein, refers to a stimulatory or inhibitory effect on the intracellular process of interest relative to the level or activity of such a process in the absence of a peptide of the invention.

Embodiments of the invention are demonstrated below wherein an extremely low concentration of DP178 (SEQ ID:1), and very low concentrations of a DP178 homolog (SEQ ID:3) are shown to be potent inhibitors of HIV-1 mediated CD-4$^+$ cell-cell fusion (i.e., syncytial formation) and infection of CD-4$^+$ cells by cell-free virus. Further, it is shown that DP178 (SEQ ID:1) is not toxic to cells, even at concentrations 3 logs higher than the inhibitory DP-178 (SEQ ID:1) concentration.

The present invention is based, in part, on the surprising discovery that the DP107 and DP178 domains of the HIV gp41 protein non-covalently complex with each other, and that their interaction is required for the normal infectivity of the virus. This discovery is described in the Example presented, below, in Section 8. The invention, therefore, further relates to methods for identifying antifusogenic, including antiviral, compounds that disrupt the interaction between DP107 and DP178, and/or between DP107-like and DP178-like peptides.

Additional embodiments of the invention (specifically, the Examples presents in Sections 9-16 and 19-25, below) are demonstrated, below, wherein peptides, from a variety of viral and nonviral sources, having structural and/or amino acid motif similarity to DP107 and DP178 are identified, and search motifs for their identification are described. Further, Examples (in Sections 17, 18, 25-29) are presented wherein a number of the peptides of the invention are demonstrated exhibit substantial antiviral activity or activity predictive of antiviral activity.

3.1. DEFINITIONS

Peptides are defined herein as organic compounds comprising two or more amino acids covalently joined by peptide bonds. Peptides may be referred to with respect to the number of constituent amino acids, i.e., a dipeptide contains two amino acid residues, a tripeptide contains three, etc. Peptides containing ten or fewer amino acids may be referred to as oligopeptides, while those with more than ten amino acid residues are polypeptides. Such peptides may also include any of the modifications and additional amino and carboxy groups as are described herein.

Peptide sequences defined herein are represented by one-letter symbols for amino acid residues as follows:

A (alanine)
R (arginine)
N (asparagine)
D (aspartic acid)
C (cysteine)
Q (glutamine)
E (glutamic acid)
G (glycine)
H (histidine)
I (isoleucine)
L (leucine)
K (lysine)
M (methionine)
F (phenylalanine)
P (proline)
S (serine)
T (threonine)
W (tryptophan)
Y (tyrosine)
V (valine)

4. BRIEF DESCRIPTION OF THE FIGURES

FIG. 1. Amino acid sequence of DP178 (SEQ ID:1) derived from HIV_{LAI}; DP178 homologs derived from $HIV\text{-}1_{SF2}$ (DP-185; SEQ ID:3), $HIV\text{-}1_{RF}$ (SEQ ID:4), and $HIV\text{-}1_{MN}$ (SEQ ID:5); DP178 homologs derived from amino acid sequences of two prototypic HIV-2 isolates, namely, $HIV\text{-}2_{rod}$ (SEQ ID:6) and $HIV\text{-}2_{NIHZ}$ (SEQ ID:7); control peptides: DP-180 (SEQ ID:2), a peptide incorporating the amino acid residues of DP178 in a scrambled sequence; DP-118 (SEQ ID:10) unrelated to DP178, which inhibits HIV-1 cell free virus infection; DP-125 (SEQ ID:8), unrelated to DP178, also inhibits HIV-1 cell free virus infection; DP-116 (SEQ ID:9), unrelated to DP178, is negative for inhibition of HIV-1 infection when tested using a cell-free virus infection assay. Throughout the figures, the one letter amino acid code is used.

FIG. 2. Inhibition of HIV-1 cell-free virus infection by synthetic peptides. IC_{50} refers to the concentration of peptide that inhibits RT production from infected cells by 50% compared to the untreated control. Control: the level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

FIG. 3. Inhibition of HIV-1 and HIV-2 cell-free virus infection by the synthetic peptide DP178 (SEQ ID:1). IC_{50}: concentration of peptide that inhibits RT production by 50% compared to the untreated control. Control: Level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

FIG. 4A-4B. Fusion Inhibition Assays. FIG 4A: DP178 (SEQ ID:1) inhibition of HIV-1 prototypic isolate-mediated syncytial formation; data represents the number of virus-induced syncytial per cell. FIG.

4B: DP-180 (SEQ ID:2) represents a scrambled control peptide; DP-185 (SEQ ID:3) represents a DP178 homolog derived from HIV-1_{SF2} isolate; Control, refers to the number of syncytial produced in the absence of peptide.

FIG. 5. Fusion inhibition assay: HIV-1 vs. HIV-2. Data represents the number of virus-induced syncytial per well. ND: not done.

FIG. 6. Cytotoxicity study of DP178 (SEQ ID:1) and DP-116 (SEQ ID:9) on CEM cells. Cell proliferation data is shown.

FIG. 7. Schematic representation of HIV-gp41 and maltose binding protein (MBP)-gp41 fusion proteins. DP107 and DP178 are synthetic peptides based on the two putative helices of gp41. The letter P in the DP107 boxes denotes an Ile to Pro mutation at amino acid number 578. Amino acid residues are numbered according to Meyers et al., "Human Retroviruses and AIDS", 1991, Theoret. Biol. and Biophys. Group, Los Alamos Natl. Lab., Los Alamos, NM. The proteins are more fully described, below, in Section 8.1.1.

FIG. 8. A point mutation alters the conformation and anti-HIV activity of M41.

FIG. 9. Abrogation of DP178 anti-HIV activity. Cell fusion assays were carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41PΔ178.

FIG. 10. Binding of DP178 to leucine zipper of gp41 analyzed by FAb-D ELISA.

FIG. 11A-B. Models for a structural transition in the HIV-1 TM protein. Two models are proposed which indicate a structural transition from a native oligomer to a fusogenic state following a trigger event (possibly gp120 binding to CD4). Common

features of both models include (1) the native state is held together by noncovalent protein-protein interactions to form the heterodimer of gp120/41 and other interactions, principally though gp41 interactive sites, to form homo-oligomers on the virus surface of the gp120/41 complexes; (2) shielding of the hydrophobic fusogenic peptide at the N-terminus (F) in the native state; and (3) the leucine zipper domain (DP107) exists as a homo-oligomer coiled coil only in the fusogenic state. The major differences in the two models include the structural state (native or fusogenic) in which the DP107 and DP178 domains are complexed to each other. In the first model (FIG. 11A) this interaction occurs in the native state and in the second (FIG. 11B), it occurs during the fusogenic state. When triggered, the fusion complex in the model depicted in (A) is generated through formation of coiled-coil interactions in homologous DP107 domains resulting in an extended α-helix. This conformational change positions the fusion peptide for interaction with the cell membrane. In the second model (FIG. 11B), the fusogenic complex is stabilized by the association of the DP178 domain with the DP107 coiled-coil.

FIG. 12. Motif design using heptad repeat positioning of amino acids of known coiled-coils.

FIG. 13. Motif design using proposed heptad repeat positioning of amino acids of DP107 and DP178.

FIG. 14. Hybrid motif design crossing GCN4 and DP107.

FIG. 15. Hybrid motif design crossing GCN4 and DP178.

FIG. 16. Hybrid motif design 107x178x4, crossing DP107 and DP178. This motif was found to be

the most consistent at identifying relevant DP107-like and DP178-like peptide regions.

FIG. 17. Hybrid motif design crossing GCN4, DP107, and DP178.

FIG. 18. Hybrid motif design ALLMOTI5 crossing GCN4, DP107, DP178, c-Fos c-Jun, c-Myc, and Flu Loop 36.

FIG. 19. PLZIP motifs designed to identify N-terminal proline-leucine zipper motifs.

FIG. 20. Search results for HIV-1 (BRU isolate) enveloped protein gp41. Sequence search motif designations: Spades (♠): 107x178x4; Hearts (♥) ALLMOTI5; Clubs (♣): PLZIP; Diamonds (♦): transmembrane region (the putative transmembrane domains were identified using a PC/Gene program designed to search for such peptide regions). Asterisk (*): Lupas method. The amino acid sequences identified by each motif are bracketed by the respective characters. Representative sequences chosen based on 107x178x4 searches are underlined and in bold. DP107 and DP178 sequences are marked, and additionally double-underlined and italicized.

FIG. 21. Search results for human respiratory syncytial virus (RSV) strain A2 fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 22. Search results for simian immunodeficiency virus (SIV) enveloped protein gp41 (AGM3 isolate). Sequence search motif designations are as in FIG. 20.

FIG. 23. Search results for canine distemper virus (strain Onderstepoort) fusion glycoprotein 1. Sequence search motif designations are as in FIG. 20.

FIG. 24. Search results for newcastle disease virus (strain Australia-Victoria/32) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 25. Search results for human parainfluenza 3 virus (strain NIH 47885) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 26. Search results for influenza A virus (strain A/AICHI/2/68) hemagglutinin precursor HA2. Sequence search designations are as in FIG. 20.

FIG. 27A-F. Respiratory Syncytial Virus (RSV) peptide antiviral and circular dichroism data. FIG. 27A-C: Peptides derived from the F2 DP178/DP107-like region. Antiviral and CD data. FIG. 27D-F: Peptides derived from the F1 DP107-like region. Peptide and CD data.

Antiviral activity (AV) is represented by the following qualitative symbols:

"-", negative antiviral activity;

"+/-", antiviral activity at greater than 100μg/ml;

"+", antiviral activity at between 50-100μg/ml;

"++", antiviral activity at between 20-50μg/ml;

"+++", antiviral activity at between 1-20μg/ml;

"++++", antiviral activity at <1μg/ml.

CD data, referring to the level of helicity is represented by the following qualitative symbol:

"-", no helicity;

"+", 25-50% helicity;

"++", 50-75% helicity;

"+++"' 75-100% helicity.

IC_{50} refers to the concentration of peptide necessary to produce only 50% of the number of syncytial relative to infected control cultures

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containing no peptide. IC_{50} values were obtained using purified peptides only.

FIG. 28A-C. Respiratory Syncytial Virus (RSV) DP178-like region (F1) peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-F. IC_{50} values were obtained using purified peptides only.

FIG. 29A-E. Peptides derived from the HPIV3 F1 DP107-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-F. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

FIG. 30A-C. Peptides derived from the HPIV3 F1 DP178-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-F. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

FIG. 31. Motif search results for simian immunodeficiency virus (SIV) isolate MM251, enveloped polyprotein gp41. Sequence search designations are as in FIG. 20.

FIG. 32. Motif search results for Epstein-Barr Virus (Strain B95-8), glycoprotein gp110 precursor (designated gp115). BALF4. Sequence search designations are as in FIG. 20.

FIG. 33. Motif search results for Epstein-Barr Virus (Strain B95-8), BZLF1 trans-activator protein (designated EB1 or Zebra). Sequence search designations are as in FIG. 20. Additionally, "@" refers to a well known DNA binding domain and "+" refers to a well known dimerization domain, as defined

by Flemington and Speck (Flemington, E. and Speck, S.H., 1990, Proc. Natl. Acad. Sci. USA 87:9459-9463).

FIG. 34. Motif search results for measles virus (strain Edmonston), fusion glycoprotein F1. Sequence search designations are as in FIG. 20.

FIG. 35. Motif search results for Hepatitis B Virus (Subtype AYW), major surface antigen precursor S. Sequence search designations are as in FIG. 20.

FIG. 36. Motif search results for simian Mason-Pfizer monkey virus, enveloped (TM) protein gp20. Sequence search designations are as in FIG. 20.

FIG. 37. Motif search results for Pseudomonas aerginosa, fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

FIG. 38. Motif search results for Neisseria gonorrhoeae fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

FIG. 39. Motif search results for Hemophilus influenzae fimbrial protein. Sequence search designations are as in FIG. 20.

FIG. 40. Motif search results for Staphylococcus aureus, toxic shock syndrome toxin-1. Sequence search designations are as in FIG. 20.

FIG. 41. Motif search results for Staphylococcus aureus enterotoxin Type E. Sequence search designations are as in FIG. 20.

FIG. 42. Motif search results for Staphylococcus aureus enterotoxin A. Sequence search designations are as in FIG. 20.

FIG. 43. Motif search results for Escherichia coli, heat labile enterotoxin A. Sequence search designations are as in FIG. 20.

FIG. 44. Motif search results for human c-fos proto-oncoprotein. Sequence search designations are as in FIG. 20.

FIG. 45. Motif search results for human lupus KU autoantigen protein P70. Sequence search designations are as in FIG. 20.

FIG. 46. Motif search results for human zinc finger protein 10. Sequence search designations are as in FIG. 20.

FIG. 47. Measles virus (MeV) fusion protein DP178-like region antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. IC_{50} values were obtained using purified peptides.

FIG. 48. Simian immunodeficiency virus (SIV) TM (fusion) protein DP178-like region antiviral data. Antiviral symbols are as in FIG. 27A-D "NT", not tested.

FIG. 49A-C. DP178-derived peptide antiviral data. The peptides listed herein were derived from the region surrounding the HIV-1 BRU isolate DP178 region (e.g., gp41 amino acid residues 615-717).

In instances where peptides contained DP178 point mutations, the mutated amino acid residues are shown with a shaded background. In instances in which the test peptide has had an amino and/or carboxy-terminal group added or removed (apart from the standard amido- and acetyl- blocking groups found on such peptides), such modifications are indicated. FIG. 49A: The column to the immediate right of the name of the test peptide indicates the size of the test peptide and points out whether the peptide is derived from a one amino acid peptide "walk" across the DP178 region. The next column to the right indicates whether the test peptide contains a point mutation, while the column to its right indicates whether certain amino acid residues have been added to or removed from the DP178-derived amino acid sequence. FIG 49B: The column to the immediate right of the test peptide name

indicates whether the peptide represents a DP178 truncation, the next column to the right points out whether the peptide contains a point mutation, and the column to its right indicates whether the peptide contains amino acids which have been added to or removed from the DP178 sequence itself. FIG. 49C: The column to the immediate right of the test peptide name indicates whether the test peptide contains a point mutation, while the column to its right indicates whether amino acid residues have been added to or removed from the DP178 sequence itself. IC_{50} is as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

FIG. 50. DP107 and DP107 gp41 region truncated peptide antiviral data. IC_{50} as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

FIG. 51A-B. Epstein-Barr virus Strain B95-8 BZLF1 DP178/DP107 analog region peptide walks and electrophoretic mobility shift assay results. The peptides (T-423 to T-446, FIG. 51A; T-447 to T-461, FIG. 51B) represent one amino acid residue "walks" through the EBV Zebra protein region from amino acid residue 173 to 246.

The amino acid residue within this region which corresponds to the first amino acid residue of each peptide is listed to the left of each peptide, while the amino acid residue within this region which corresponds to the last amino acid residue of each peptide is listed to the right of each peptide. The

length of each test peptide is listed at the far right of each line, under the heading "Res".

"ACT" refers to a test peptide's ability to inhibit Zebra binding to its response element. "+" refers to a visible, but incomplete, abrogation of the response element/Zebra homodimer complex; "+++" refers to a complete abrogation of the complex; and "-" represents a lack of complex disruption.

FIG. 52A-B. Hepatitis B virus subtype AYW major surface antigen precursor S protein DP178/DP107 analog region and peptide walks. 52A depicts Domain I (S protein amino acid residues 174-220), which contains a potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain I. 52B depicts Domain II (S protein amino acid residues 233-291), which contains a second potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain II.

5. DETAILED DESCRIPTION OF THE INVENTION

Described herein are peptides which may exhibit antifusogenic activity, antiviral capability, and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. The peptides described include, first, DP178 (SEQ ID NO:1), a gp41-derived 36 amino acid peptide and fragments and analogs of DP178.

In addition, the peptides of the invention described herein include peptides which are DP107 analogs. DP107 (SEQ ID NO:25) is a 38 amino acid peptide corresponding to residues 558 to 595 of the HIV-1_{LAI} transmembrane (TM) gp41 protein. Such DP107 analogs may exhibit antifusogenic capability, antiviral activity or an ability to modulate

intracellular processes involving coiled-coil structures.

Further, peptides of the invention include DP107 and DP178 are described herein having amino acid sequences recognized by the 107x178x4, ALLMOTI5, and PLZIP search motifs. Such motifs are also discussed.

Also described here are antifusogenic, antiviral, intracellular modulatory, and diagnostic uses of the peptides of the invention. Further, procedures are described for the use of the peptides of the invention for the identification of compounds exhibiting antifusogenic, antiviral or intracellular modulatory activity.

While not limited to any theory of operation, the following model is proposed to explain the potent anti-HIV activity of DP178, based, in part, on the experiments described in the Examples, infra. In the HIV protein, gp41, DP178 corresponds to a putative α-helix region located in the C-terminal end of the gp41 ectodomain, and appears to associate with a distal site on gp41 whose interactive structure is influenced by the leucine zipper motif, a coiled-coil structure, referred to as DP107. The association of these two domains may reflect a molecular linkage or "molecular clasp" intimately involved in the fusion process. It is of interest that mutations in the C-terminal α-helix motif of gp41 (i.e., the D178 domain) tend to enhance the fusion ability of gp41, whereas mutations in the leucine zipper region (i.e., the DP107 domain) decrease or abolish the fusion ability of the viral protein. It may be that the leucine zipper motif is involved in membrane fusion while the C-terminal α-helix motif serves as a molecular safety to regulate the availability of the leucine zipper during virus-induced membrane fusion.

On the basis of the foregoing, two models are proposed of gp41-mediated membrane fusion which are schematically shown in FIG. 11A-B. The reason for proposing two models is that the temporal nature of the interaction between the regions defined by DP107 and DP178 cannot, as yet, be pinpointed. Each model envisions two conformations for gp41 - one in a "native" state as it might be found on a resting virion. The other in a "fusogenic" state to reflect conformational changes triggered following binding of gp120 to CD4 and just prior to fusion with the target cell membrane. The strong binding affinity between gp120 and CD4 may actually represent the trigger for the fusion process obviating the need for a pH change such as occurs for viruses that fuse within intracellular vesicles. The two major features of both models are: (1) the leucine zipper sequences (DP107) in each chain of oligomeric enveloped are held apart in the native state and are only allowed access to one another in the fusogenic state so as to form the extremely stable coiled-coils, and (2) association of the DP178 and DP107 sites as they exist in gp41 occur either in the native or fusogenic state. FIG. 11A depicts DP178/DP107 interaction in the native state as a molecular clasp. On the other hand, if one assumes that the most stable form of the enveloped occurs in the fusogenic state, the model in FIG. 11B can be considered.

When synthesized as peptides, both DP107 and DP178 are potent inhibitors of HIV infection and fusion, probably by virtue of their ability to form complexes with viral gp41 and interfere with its fusogenic process; e.g., during the structural transition of the viral protein from the native structure to the fusogenic state, the DP178 and DP107

peptides may gain access to their respective binding sites on the viral gp41, and exert a disruptive influence. DP107 peptides which demonstrate anti-HIV activity are described in Applicants' co-pending application Serial No. 08/264,531, filed June 23, 1994, which is incorporated by reference herein in its entirety.

As shown in the Examples, infra, a truncated recombinant gp41 protein corresponding to the ectodomain of gp41 containing both DP107 and DP178 domains (excluding the fusion peptide, transmembrane region and cytoplasmic domain of gp41) did not inhibit HIV-1 induced fusion. However, when a single mutation was introduced to disrupt the coiled-coil structure of the DP107 domain -- a mutation which results in a total loss of biological activity of DP107 peptides -- the inactive recombinant protein was transformed to an active inhibitor of HIV-1 induced fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107 domain.

For clarity of discussion, the invention will be described primarily for DP178 peptide inhibitors of HIV. However, the principles may be analogously applied to other viruses, both enveloped and nonenveloped, and to other non-viral organisms.

5.1. DP178 AND DP178-LIKE PEPTIDES

The DP178 peptide (SEQ ID:1) of the invention corresponds to amino acid residues 638 to 673 of the transmembrane protein gp41 from the HIV-1_{LAI} isolate, and has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:1)

In addition to the full-length DP178 (SEQ ID:1) 36-mer, the peptides of the invention may include truncations of the DP178 (SEQ ID:1) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. Truncations of DP178 (SEQ ID:1) peptides may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide), as shown in Tables I and IA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE I
DP178 (SEQ ID:1) CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSL-Z
X-YTSLI-Z
X-YTSLIH-Z
X-YTSLIHS-Z
X-YTSLIHSL-Z
X-YTSLIHSLI-Z
X-YTSLIHSLIE-Z
X-YTSLIHSLIEE-Z
X-YTSLIHSLIEES-Z
X-YTSLIHSLIEESQ-Z
X-YTSLIHSLIEESQN-Z
X-YTSLIHSLIEESQNQ-Z
X-YTSLIHSLIEESQNQQ-Z
X-YTSLIHSLIEESQNQQE-Z
X-YTSLIHSLIEESQNQQEK-Z
X-YTSLIHSLIEESQNQQEKN-Z
X-YTSLIHSLIEESQNQQEKNE-Z
X-YTSLIHSLIEESQNQQEKNEQ-Z
X-YTSLIHSLIEESQNQQEKNEQE-Z
X-YTSLIHSLIEESQNQQEKNEQEL-Z
X-YTSLIHSLIEESQNQQEKNEQELL-Z
X-YTSLIHSLIEESQNQQEKNEQELLE-Z
X-YTSLIHSLIEESQNQQEKNEQELLEL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELD-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDK-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWA-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWN-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IA
DP178 (SEQ ID:1) AMINO TRUNCATIONS

X-NWF-Z
X-WNWF-Z
X-LWNWF-Z
X-SLWNWF-Z
X-ASLWNWF-Z
X-WASLWNWF-Z
X-KWASLWNWF-Z
X-DKWASLWNWF-Z
X-LDKWASLWNWF-Z
X-ELDKWASLWNWF-Z
X-LELDKWASLWNWF-Z
X-LLELDKWASLWNWF-Z
X-ELLELDKWASLWNWF-Z
X-QELLELDKWASLWNWF-Z
X-EQELLELDKWASLWNWF-Z
X-NEQELLELDKWASLWNWF-Z
X-KNEQELLELDKWASLWNWF-Z
X-EKNEQELLELDKWASLWNWF-Z
X-QEKNEQELLELDKWASLWNWF-Z
X-QQEKNEQELLELDKWASLWNWF-Z
X-NQQEKNEQELLELDKWASLWNWF-Z
X-QNQQEKNEQELLELDKWASLWNWF-Z
X-SQNQQEKNEQELLELDKWASLWNWF-Z
X-ESQNQQEKNEQELLELDKWASLWNWF-Z
X-EESQNQQEKNEQELLELDKWASLWNWF-Z
X-IEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-HSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-IHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP178-like peptides. "DP178-like", as used herein, refers, first, to DP178 and DP178 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-178-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP178. The DP178-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP178-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP178-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP178 peptides of the invention. Utilizing the DP178 and DP178 analog sequences described herein, the skilled artisan can readily compile DP178 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP178 or DP178 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP178 region of the gp41 protein.

Deletions of DP178 (SEQ ID:1) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP178 or DP178-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are further described, below, in Section 5.3.

5.2. DP107 AND DP107-LIKE PEPTIDES

Further, the peptides of the invention include peptides having amino acid sequences corresponding to DP107 analogs. DP107 is a 38 amino acid peptide which exhibits potent antiviral activity, and corresponds to residues 558 to 595 of HIV-1_{LAI} transmembrane (TM) gp41 protein, as shown here:

NH_2-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-COOH
(SEQ ID:25)

In addition to the full-length DP107 (SEQ ID:25) 38-mer, the peptides of the invention may include truncations of the DP107 (SEQ ID:25) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes

involving coiled-coil peptide structures. Truncations of DP107 (SEQ ID:25) peptides may comprise peptides of between 3 and 38 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 38-mer polypeptide), as shown in Tables II and IIA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE II
DP107 (SEQ ID:25) CARBOXY TRUNCATIONS

X-NNL-Z
X-NNLL-Z
X-NNLLR-Z
X-NNLLRA-Z
X-NNLLRAI-Z
X-NNLLRAIE-Z
X-NNLLRAIEA-Z
X-NNLLRAIEAQ-Z
X-NNLLRAIEAQQ-Z
X-NNLLRAIEAQQH-Z
X-NNLLRAIEAQQHL-Z
X-NNLLRAIEAQQHLL-Z
X-NNLLRAIEAQQHLLQ-Z
X-NNLLRAIEAQQHLLQL-Z
X-NNLLRAIEAQQHLLQLT-Z
X-NNLLRAIEAQQHLLQLTV-Z
X-NNLLRAIEAQQHLLQLTVW-Z
X-NNLLRAIEAQQHLLQLTVWQ-Z
X-NNLLRAIEAQQHLLQLTVWQI-Z
X-NNLLRAIEAQQHLLQLTVWQIK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQAR-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARI-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARIL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAV-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVE-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVER-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERY-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKD-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IIA
DP178 (SEQ ID:25) AMINO TRUNCATIONS

X-KDQ- Z
X-LKDQ- Z
X-YLKDQ- Z
X-RYLKDQ- Z
X-ERYLKDQ- Z
X-VERYLKDQ- Z
X-AVERYLKDQ- Z
X-LAVERYLKDQ- Z
X-ILAVERYLKDQ- Z
X-RILAVERYLKDQ- Z
X-ARILAVERYLKDQ- Z
X-QARILAVERYLKDQ- Z
X-LQARILAVERYLKDQ- Z
X-QLQARILAVERYLKDQ- Z
X-KQLQARILAVERYLKDQ- Z
X-IKQLQARILAVERYLKDQ- Z
X-QIKQLQARILAVERYLKDQ- Z
X-WQIKQLQARILAVERYLKDQ- Z
X-VWQIKQLQARILAVERYLKDQ- Z
X-TVWQIKQLQARILAVERYLKDQ- Z
X-LTVWQIKQLQARILAVERYLKDQ- Z
X-QLTVWQIKQLQARILAVERYLKDQ- Z
X-LQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLQLTVWQIKQLQARILAVERYLKDQ- Z
X-HLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-EAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-IEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-RAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP107-like peptides. "DP107-like", as used herein, refers, first, to DP107 and DP107 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-107-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP107. The DP107-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP107-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP107-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP107 peptides of the invention. Utilizing the DP107 and DP107 analog sequences described herein, the skilled artisan can readily compile DP107 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP107 or DP107 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP107 (SEQ.ID:25) or DP107 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP107 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP107 region of the gp41 protein.

Deletions of DP107 (SEQ ID:25) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP107 or DP107-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP107 (SEQ.ID:25) or DP107 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP107 and DP107 truncations are more fully described in Applicants' co-pending U.S. Patent Application Ser. No. 08/374,666, filed January 27, 1995, and which is incorporated herein by reference in its entirety. DP107 analogs are further described, below, in Section 5.3.

5.3. DP107 and DP178 ANALOGS

Peptides corresponding to analogs of the DP178, DP178 truncations, DP107 and DP107 truncation sequences of the invention, described, above, in Sections 5.1 and 5.2 may be found in other viruses, including, for example, non-HIV-1_{LAI} enveloped viruses, non-enveloped viruses and other non-viral organisms.

The term "analog", as used herein, refers to a peptide which is recognized or identified via the 107x178x4, ALLMOTI5 and/or PLZIP search strategies discussed below. Further, such peptides may exhibit antifusogenic capability, antiviral activity, or the

ability to modulate intracellular processes involving coiled-coil structures.

Such DP178 and DP107 analogs may, for example, correspond to peptide sequences present in TM proteins of enveloped viruses and may, additionally correspond to peptide sequences present in non enveloped and non-viral organisms. Such peptides may exhibit antifusogenic activity, antiviral activity, most particularly antiviral activity which is specific to the virus in which their native sequences are found, or may exhibit an ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are peptides whose amino acid sequences are comprised of the amino acid sequences of peptide regions of, for example, other (i.e., other than HIV-1_{LAI}) viruses that correspond to the gp41 peptide region from which DP178 (SEQ ID:1) was derived. Such viruses may include, but are not limited to, other HIV-1 isolates and HIV-2 isolates. DP178 analogs derived from the corresponding gp41 peptide region of other (i.e., non HIV-1_{LAI}) HIV-1 isolates may include, for example, peptide sequences as shown below.

NH_2-YTNTIYTLLEESQNQQEKNEQELLELDKWASLWNWF-COOH (DP-185; SEQ ID:3);

NH_2-YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF-COOH (SEQ ID:4);

NH_2-YTSLIYSLLEKSQIQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:5).

SEQ ID:3 (DP-185), SEQ ID:4, and SEQ ID:5 are derived from HIV-1_{SF2}, HIV-1_{RF}, and HIV-1_{MN} isolates, respectively. Underlined amino acid residues refer to those residues that differ from the corresponding position in the DP178 (SEQ ID:1) peptide. One such

DP178 analog, DP-185 (SEQ ID:3), is described in the Example presented in Section 6, below, where it is demonstrated that DP-185 (SEQ ID:3) exhibits antiviral activity. The DP178 analogs of the invention may also include truncations, as described above. Further, the analogs of the invention modifications such those described for DP178 analogs in Section 5.1., above. It is preferred that the DP178 analogs of the invention represent peptides whose amino acid sequences correspond to the DP178 region of the gp41 protein, it is also contemplated that the peptides of the invention may, additionally, include amino sequences, ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 amino acid sequence.

Striking similarities, as shown in FIG. 1, exist within the regions of HIV-1 and HIV-2 isolates which correspond to the DP178 sequence. A DP178 analog derived from the HIV-2_{NIHZ} isolate has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-COOH (SEQ ID:7)

Table III and Table IV show some possible truncations of the HIV-2_{NIHZ} DP178 analog, which may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide). Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group (-NH_2) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a

covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE III

HIV-2_{NIHZ} DP178 analog carboxy truncations.

X-LEA-Z
X-LEAN-Z
X-LEANI-Z
X-LEANIS-Z
X-LEANISQ-Z
X-LEANISQS-Z
X-LEANISQSL-Z
X-LEANISQSLE-Z
X-LEANISQSLEQ-Z
X-LEANISQSLEQA-Z
X-LEANISQSLEQAQ-Z
X-LEANISQSLEQAQI-Z
X-LEANISQSLEQAQIQ-Z
X-LEANISQSLEQAQIQQ-Z
X-LEANISQSLEQAQIQQE-Z
X-LEANISQSLEQAQIQQEK-Z
X-LEANISQSLEQAQIQQEKN-Z
X-LEANISQSLEQAQIQQEKNM-Z
X-LEANISQSLEQAQIQQEKNMY-Z
X-LEANISQSLEQAQIQQEKNMYE-Z
X-LEANISQSLEQAQIQQEKNMYEL-Z
X-LEANISQSLEQAQIQQEKNMYELQ-Z
X-LEANISQSLEQAQIQQEKNMYELQK-Z
X-LEANISQSLEQAQIQQEKNMYELQKL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNS-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWD-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDV-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVF-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFT-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IV

HIV-2_{NIH2} DP178 analog amino truncations.

X-NWL-Z
X-TNWL-Z
X-FTNWL-Z
X-VFTNWL-Z
X-DVFTNWL-Z
X-WDVFTNWL-Z
X-SWDVFTNWL-Z
X-NSWDVFTNWL-Z
X-LNSWDVFTNWL-Z
X-KLNSWDVFTNWL-Z
X-QKLNSWDVFTNWL-Z
X-LQKLNSWDVFTNWL-Z
X-ELQKLNSWDVFTNWL-Z
X-YELQKLNSWDVFTNWL-Z
X-MYELQKLNSWDVFTNWL-Z
X-NMYELQKLNSWDVFTNWL-Z
X-KNMYELQKLNSWDVFTNWL-Z
X-EKNMYELQKLNSWDVFTNWL-Z
X-QEKNMYELQKLNSWDVFTNWL-Z
X-QQEKNMYELQKLNSWDVFTNWL-Z
X-IQQEKNMYELQKLNSWDVFTNWL-Z
X-QIQQEKNMYELQKLNSWDVFTNWL-Z
X-AQIQQEKNMYELQKLNSWDVFTNWL-Z
X-QAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-EQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-LEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-SLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-QSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-SQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-ISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-NISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-ANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-EANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

DP178 and DP107 analogs are recognized or identified, for example, by utilizing one or more of the 107x178x4, ALLMOTI5 or PLZIP computer-assisted search strategies described and demonstrated, below, in the Examples presented in Sections 9 through 16 and 19 through 25. The search strategy identifies additional peptide regions which are predicted to have structural and/or amino acid sequence features similar to those of DP107 and/or DP178.

The search strategies are described fully, below, in the Example presented in Section 9. While this search strategy is based, in part, on a primary amino acid motif deduced from DP107 and DP178, it is not based solely on searching for primary amino acid sequence homologies, as such protein sequence homologies exist within, but not between major groups of viruses. For example, primary amino acid sequence homology is high within the TM protein of different strains of HIV-1 or within the TM protein of different isolates of simian immunodeficiency virus (SIV). Primary amino acid sequence homology between HIV-1 and SIV, however, is low enough so as not to be useful. It is not possible, therefore, to find peptide regions similar to DP107 or DP178 within other viruses, or within non-viral organisms, whether structurally, or otherwise, based on primary sequence homology, alone.

Further, while it would be potentially useful to identify primary sequence arrangements of amino acids based on, for example, the physical chemical characteristics of different classes of amino acids rather than based on the specific amino acids themselves, such search strategies have, until now, proven inadequate. For example, a computer algorithm designed by Lupas et al. to identify coiled-coil propensities of regions within proteins (Lupas, A., et al., 1991 Science 252:1162-1164) is inadequate for

identifying protein regions analogous to DP107 or DP178.

Specifically, analysis of HIV-1 gp160 (containing both gp120 and gp41) using the Lupas algorithm does not identify the coiled-coil region within DP107. It does, however, identify a region within DP178 beginning eight amino acids N-terminal to the start of DP178 and ending eight amino acids from the C-terminus. The DP107 peptide has been shown experimentally to form a stable coiled coil. A search based on the Lupas search algorithm, therefore, would not have identified the DP107 coiled-coil region. Conversely, the Lupas algorithm identified the DP178 region as a potential coiled-coil motif. However, the peptide derived from the DP178 region failed to form a coiled coil in solution.

A possible explanation for the inability of the Lupas search algorithm to accurately identify coiled-coil sequences within the HIV-1 TM, is that the Lupas algorithm is based on the structure of coiled coils from proteins that are not structurally or functionally similar to the TM proteins of viruses, antiviral peptides (e.g. DP107 and DP178) of which are an object of this invention.

The computer search strategy of the invention, as demonstrated in the Examples presented below, in Sections 9 through 16 and 19 through 25, successfully identifies regions of proteins similar to DP107 or DP178. This search strategy was designed to be used with a commercially-available sequence database package, preferably PC/Gene.

A series of search motifs, the 107x178x4, ALLMOTI5 and PLZIP motifs, were designed and engineered to range in stringency from strict to broad, as discussed in this Section and in Section 9, with 107x178x4 being preferred. The sequences

identified via such search motifs, such as those listed in Tables V-XIV, below, potentially exhibit antifusogenic, such as antiviral, activity, may additionally be useful in the identification of antifusogenic, such as antiviral, compounds, and are intended to be within the scope of the invention.

Coiled-coiled sequences are thought to consist of heptad amino acid repeats. For ease of description, the amino acid positions within the heptad repeats are sometimes referred to as A through G, with the first position being A, the second B, etc. The motifs used to identify DP107-like and DP178-like sequences herein are designed to specifically search for and identify such heptad repeats. In the descriptions of each of the motifs described, below, amino acids enclosed by brackets , i.e., [], designate the only amino acid residues that are acceptable at the given position, while amino acids enclosed by braces, i.e., {}, designate the only amino acids which are unacceptable at the given heptad position. When a set of bracketed or braced amino acids is followed by a number in parentheses i.e., (), it refers to the number of subsequent amino acid positions for which the designated set of amino acids hold, e.g, a (2) means "for the next two heptad amino acid positions".

The ALLMOTI5 is written as follows:

{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-

Translating this motif, it would read: "at the first (A) position of the heptad, any amino acid residue except C, D, G, H, or P is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, or P is acceptable, at the fourth heptad position (D), any amino acid residue except C,

D, G, H, or P is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, or P is acceptable. This motif is designed to search for five consecutive heptad repeats (thus the repeat of the first line five times), meaning that it searches for 35-mer sized peptides. It may also be designed to search for 28-mers, by only repeating the initial motif four times. With respect to the ALLMOTI5 motif, a 35-mer search is preferred. Those viral (non-bacteriophage) sequences identified via such an ALLMOTI5 motif are listed in Table V, below, at the end of this Section. The viral sequences listed in Table V potentially exhibit antiviral activity, may be useful in the the identification of antiviral compounds, and are intended to be within the scope of the invention. In those instances wherein a single gene exhibits greater than one sequence recognized by the ALLMOTI5 search motif, the amino a cid residue numbers of these sequences are listed under "Area 2", Area 3", etc. This convention is used for each of the Tables listed, below, at the end of this Section.

The 107x178x4 motif is written as follows:

[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-

Translating this motif, it would read: "at the first (A) position of the heptad, only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, M or P is acceptable, at the fourth position (D), only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, M or P is acceptable. This motif is designed to search for

four consecutive heptad repeats (thus the repeat of the first line four times), meaning that it searches for 28-mer sized peptides. It may also be designed to search for 35-mers, by repeating the initial motif five times. With respect to the 107x178x4 motif, a 28-mer search is preferred.

Those viral (non-bacteriophage) sequences identified via such a 107x178x4 motif are listed in Table VI, below, at the end of this Section, with those viral (non-bacteriophage) sequences listed in Table VII, below at the end of this Section, being preferred.

The 107x178x4 search motif was also utilized to identify non-viral procaryotic protein sequences, as listed in Table VIII, below, at the end of this Section. Further, this search motif was used to reveal a number of human proteins. The results of this human protein 107x178x4 search is listed in Table IX, below, at the end of this Section. The sequences listed in Tables VIII and IX, therefore, reveal peptides which may be useful as antifusogenic compounds or in the identification of antifusogenic compounds, and are intended to be within the scope of the invention.

The PLZIP series of motifs are as listed in FIG. 19. These motifs are designed to identify leucine zipper coiled-coil like heptads wherein at least one proline residue is present at some predefined distance N-terminal to the repeat. These PLZIP motifs find regions of proteins with similarities to HIV-1 DP178 generally located just N-terminal to the transmembrane anchor. These motifs may be translated according to the same convention described above. Each line depicted in FIG. 19 represents a single, complete search motif. "X" in these motifs refers to any amino acid residue. In instances wherein a motif contains

two numbers within parentheses, this refers to a variable number of amino acid residues. For example, X (1,12) is translated to "the next one to twelve amino acid residues, inclusive, may be any amino acid".

Tables X through XIV, below, at the end of this Section, list sequences identified via searches conducted with such PLZIP motifs. Specifically, Table X lists viral sequences identified via PCTLZIP, P1CTLZIP and P2CTLZIP search motifs, Table XI lists viral sequences identified via P3CTLZIP, P4CTLZIP, P5CTLZIP and P6CTLZIP search motifs, Table XII lsts viral sequences identified via P7CTLZIP, P8CTLZIP and P9CTLZIP search motifs, Table XIII lists viral sequences identified via P12LZIPC searches and Table XIV lists viral sequences identified via P23TLZIPC search motifs The viral sequences listed in these tables represent peptides which potentially exhibit antiviral activity, may be useful in the identification of antiviral compounds, and are intended to be within the scope of the invention.

The Examples presented in Sections 17, 18, 26 and 27 below, demonstrate that viral sequences identified via the motif searches described herein identify substantial antiviral characteristics. Specifically, the Example presented in Section 17 describes peptides with anti-respiratory syncytial virus activity, the Example presented in Section 18 describes peptides with anti-parainfluenza virus activity, the Example presented in Section 26 describes peptides with anti-measles virus activity and the Example presented in Section 27 describes peptides with anti-simian immunodeficiency virus activity.

The DP107 and DP178 analogs may, further, contain any of the additional groups described for DP178, above, in Section 5.1. For example, these peptides

may include any of the additional amino-terminal groups as described above for "X" groups, and may also include any of the carboxy-terminal groups as described, above, for "Z" groups.

Additionally, truncations of the identified DP107 and DP178 peptides are among the peptides of the invention. Further, such DP107 and DP178 analogs and DP107/DP178 analog truncations may exhibit one or more amino acid substitutions, insertion, and/or deletions. The DP178 analog amino acid substitutions, insertions and deletions, are as described, above, for DP178-like peptides in Section 5.1. The DP-107 analog amino acid substitutions, insertions and deletions are also as described, above, for DP107-like peptides in Section 5.2.

Tables XV through XXII, below, present representative examples of such DP107/DP178 truncations. Specifically, Table XV presents Respiratory Syncytial Virus F1 region DP107 analog carboxy truncations, Table XVI presents Respiratory Syncytial Virus F1 region DP107 analog amino truncations, Table XVII presents Respiratory Syncytial Virus F1 region DP178 analog carboxy truncations, Table XVIII presents Respiratory Syncytial Virus F1 region DP178 analog amino truncations, Table XIX presents Human Parainfluenza Virus 3 F1 region DP178 analog carboxy truncations, Table XX presents Human Parainfluenza Virus 3 F1 region DP178 analog amino truncations, Table XXI presents Human Parainfluenza Virus 3 F1 region DP107 analog carboxy truncations and Table XXII presents Human Parainfluenza Virus 3 F1 region DP107 analog amino truncations. Further, Table XXIII, below, presents DP107/DP178 analogs and analog truncations which exhibit substantial antiviral activity. These antiviral peptides are grouped according to the specific virus which they inhibit,

including respiratory syncytial virus, human parainfluenza virus 3, simian immunodeficiency virus and measles virus.

TABLE V

ALLMOTI5 SEARCH RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
P190K_TRVPS	POTENTIAL 190 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	113-153							
P194K_TRVSY	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM	144-178	214-248	391-446	644-678	1045-1079	1135-1176	1335-1376	1615-1655
P55KD_HSV6U	55 8 KD PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	228-262							
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	3-48	100-144						
PAANT_HDVD3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE D380)	7-48	100-144						
PAANT_HDVIT	DELTA ANTIGEN (ALPHA ANTIGEN)	HEPATITIS DELTA VIRUS (ISOLATE ITALIAN)	3-48	100-144						
PAANT_HDVL1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE LEBANON-1)	3-48							
PAANT_HDVM1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE M-1)	3-48	100-144						
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE M-2)	3-48	100-144						
PAANT_HDVNA	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE NAURU)	3-48	100-144						
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-1)	1-49	100-144						
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-2)	1-49	100-144						
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE WOODCHUCK)	3-48	100-144						
PAT3H_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438)	71-110							
PAT1I_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	14-57	420-564	570-625					
PAT1I_VARV	81 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	425-525	531-565	571-628					
PAT12_HSV11	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	304-345							
PAT12_HSV1F	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	102-139	304-345						
PAT12_HSVEB	ALPHA TRANS-INDUCING FACTOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-147	268-331						
PAT12_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	79-124	219-263						
PAT12_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	79-124							
PAT12_VZVD	ALPHA TRANS-INDUCING FACTOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	298-361	395-429						
PAT1J_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	51-95							
PATIN_HSV2J	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	178-219	324-381						
PATIN_HSV2H	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	177-222	324-381						
PATIN_HSVBP	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1	195-256							
PATIN_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1	241-289							
PATIN_VZVD	ALPHA TRANS-INDUCING PROTEIN (	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	206-252							
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-57	426-526	532-566	572-629	803-989	1106-1150		
PBDL3_EBV	PROTEIN BDLF2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-131							
PBRL1_EBV	TRANSCRIPTION ACTIVATOR BRLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-187							
PCOA1_POVBA	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	159-195							
PCOA1_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	109-143							
PCOA2_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	141-213							
PCOA2_POVBA	COAT PROTEIN VP2	POLYOMAVIRUS BK (STRAIN AS)	14-64	317-351						
PCOA2_POVBK	COAT PROTEIN VP2	POLYOMAVIRUS BK	14-64	317-351						
PCOA2_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	35-76	153-216						
PCOA2_POVHA	COAT PROTEIN VP2	HAMSTER POLYOMAVIRUS	7-48	174-208						
PCOA2_POVJC	COAT PROTEIN VP2	POLYOMAVIRUS JC	14-64	233-267						
PCOA2_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	14-78	156-206						
PCOA2_POVMI	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN 3)	5-72	137-185						
PCOA2_POVMA	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVMC	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVMK	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	15-56	177-211						
PCOA2_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	14-62	228-262	318-352					
PCOAT_ABMVW	COAT PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA	180-214							
PCOAT_ACLSV	COAT PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	154-188							
PCOAT_AEDEV	COAT PROTEIN VP1	AEDES DENSONUCLEOSIS VIRUS	243-284							
PCOAT_AMCV	COAT PROTEIN	ARTICHOKE MOTTLED CRINKLE VIRUS	36-70	100-134						
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	89-123							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PCOAT_BMV	COAT PROTEIN	BROME MOSAIC VIRUS	36-73							
PCOAT_BYDV1	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVM	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVP	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_BYDVR	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN	56-90	186-223						
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	186-223						
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	185-222						
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	13-51							
PCOAT_CCMV	COAT PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	141-178							
PCOAT_CERV	PROBABLE COAT PROTEIN	CARNATION ETCHED RING VIRUS	192-226							
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	393-435							
PCOAT_CLVK	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CMVFC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVI	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVP6	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVQ	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVWL	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVY	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-365							
PCOAT_CSMV	COAT PROTEIN	CHLORUS STRIATE MOSAIC VIRUS	184-218							
PCOAT_CTV36	COAT PROTEIN	CITRUS TRISTEZA VIRUS	79-120							
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	162-204							
PCOAT_EPMV	COAT PROTEIN	EGGPLANT MOSAIC VIRUS	40-74							
PCOAT_FCVC6	COAT PROTEIN	FELINE CALICIVIRUS	432-466	566-600						
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS	502-550	566-600						
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS	519-553	569-603						
PCOAT_FMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS	144-199	206-247	449-483					
PCOAT_FXMV	COAT PROTEIN	FOXTAIL MOSAIC VIRUS	168-220							
PCOAT_IRV1	CAPSID PROTEIN	TIPULA IRIDESCENT VIRUS	90-124							
PCOAT_IRV22	CAPSID PROTEIN	SIMULIUM IRIDESCENT VIRUS	90-124							
PCOAT_IRV6	CAPSID PROTEIN	CHILO IRIDESCENT VIRUS	51-85							
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	32-70	255-289						
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	7-76	84-121						
PCOAT_MSVK	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVN	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVS	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	105-139							
PCOAT_PAVBO	COAT PROTEIN VP2	BOVINE PARVOVIRUS	380-414	444-480						
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS	497-531							
PCOAT_PEBV	COAT PROTEIN	PEA EARLY BROWNING VIRUS	73-114							
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS	36-81							
PCOAT_PPMV3	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS	104-138							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS	38-72	251-292						
PCOAT_PYMVV	COAT PROTEIN	POTATO YELLOW MOSAIC VIRUS	190-224							
PCOAT_RBDV	COAT PROTEIN	RASPBERRY BUSHY DWARF VIRUS	10-44	140-199						
PCOAT_RCNMV	COAT PROTEIN	RED CLOVER NECROTIC MOSAIC VIRUS	272-306							
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	34-68	83-120	259-309					
PCOAT_SLCV	COAT PROTEIN	SQUASH LEAF CURL VIRUS	190-224							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PCOAT_SMWLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	66-100							
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-166							
PCOAT_STNV1	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 1	2-50							
PCOAT_STNV2	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 2	38-72							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	7-55							
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	14-48							
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	1-37	43-77						
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	44-78	100-134						
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	12-46							
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	186-220							
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	103-137							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	76-138							
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TRVCA	COAT PROTEIN	TOBACCO RATTLE VIRUS	71-109							
PCOAT_TRVTC	COAT PROTEIN	TOBACCO RATTLE VIRUS	69-103							
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS	2-36							
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_WCMVO	COAT PROTEIN	WHITE CLOVER MOSAIC VIRUS	163-197							
PCORA_HPBGS	CORE ANTIGEN	GROUND SQUIRREL HEPATITIS VIRUS	94-135							
PCORA_HPBV9	CORE ANTIGEN	HEPATITIS B VIRUS	111-149							
PCORA_WHV1	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 1	62-106							
PCORA_WHV8	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 8	62-106							
PD250_ASFB7	PROTEIN D250R	AFRICAN SWINE FEVER VIRUS	198-232							
PDNB2_ADE02	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	291-336							
PDNB2_ADE05	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 5	291-336							
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS	215-252	718-752	974-1009	1027-1068				
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS	338-372	1013-1070						
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSVB2	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2	552-591	599-633	1048-1131					
PDNBI_HSVE1	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	273-314							
PDNBI_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	617-658	1107-1148						
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI	222-259	330-367	506-557	873-907				
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS	584-618	987-1125						
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS	525-562							
PDNBI_VZVD	MAJOR DNA-BINDING PROTEIN	VARICELLA-ZOSTER VIRUS	613-650	1043-1077						
PDNLI_ASFM2	DNA LIGASE	AFRICAN SWINE FEVER VIRUS	72-106							
PDNLI_VACCC	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNLI_VACCV	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	395-436							
PDPOL_ADE02	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	667-743							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	667-743							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	733-809							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	665-741							
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	23-64	202-240						
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	247-284							
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	247-284							
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	80-114	371-412					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-787	1033-1074						
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	5-39							
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39							
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S3)	5-39	297-338						
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	291-325							
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39	224-265	557-595					
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	201-235							
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	511-559							
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI	511-559							
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	511-559							
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	511-559							
PDPOL_HSV21	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	512-560							
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	494-528							
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)	33-67	328-366	401-435	706-749	808-858			
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	595-646							
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	627-683	770-818	828-862					
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	627-683	770-818	828-862					
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	626-682	769-817	827-861					
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	473-533							
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326							
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331							
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	289-330							
PDPOL_WHV8I	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	290-331							
PDPOM_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDUT_HSVEB	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P	135-169							
PDUT_HSVSA	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	HERPESVIRUS SAIMIRI (STRAIN 11)	179-223							
PE1A_ADE41	EARLY E1A 27 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	107-141							
PE1BL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	102-166							
PE1BS_ADE02	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 2	103-137							
PE1BS_ADE05	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 5	103-137							
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	96-131							
PE1BS_ADE40	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	100-134							
PE1BS_ADE41	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 41	100-134							
PE1BS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	119-173							
PE3I4_ADE02	EARLY E3B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	2-39							
PE3I4_ADE03	EARLY E3 15.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	8-49							
PE3I4_ADE05	EARLY E3 14.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	2-39							
PE3I4_ADE07	EARLY E3 15.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	7-48							
PE3I20_ADE35	EARLY E3 20.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	70-107							
PE3I21_ADE35	EARLY E3 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	125-169							
PE4I1_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	10-44							
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	10-44							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	123-157							
PEBN4_EBV	EBNA-4 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	487-521							
PEFT1_VARV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	23-71	307-341						

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)							
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PENV1_FSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-378						
PENV2_FSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-378						
PENV2_FSFV	ENV POLYPROTEIN PRECURSOR	AVIAN RETICULOENDOTHELIOSIS VIRUS	426-472						
PENV_AVSIN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	426-478						
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	390-436						
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	10-44	88-122	221-255	330-410	635-691		
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	10-44	88-122	159-193	250-284	559-639	664-724	
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-339						
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-339						
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-339						
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB2B5)	304-339						
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-339						
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-339						
PENV_CAEVC	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	157-196	613-720	751-785	847-895			
PENV_CAEVG	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	154-193	611-718	749-783	845-893			
PENV_EIAV1	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-1)	39-76	436-523	559-593	658-716			
PENV_EIAV2	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-2)	39-76	436-523	559-593	658-692			
PENV_EIAV3	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-3)	39-76	436-523	559-593	658-716			
PENV_EIAV5	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-5)	38-76	437-526	560-594	659-693			
PENV_EIAV9	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	39-76	436-523	559-593	658-716			
PENV_EIAVC	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	39-76	436-523	559-593	658-716			
PENV_EIAVW	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	39-76	436-523	559-593	658-716			
PENV_EIAVY	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	39-76	436-523	559-593	658-716			
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	503-555	563-604					
PENV_FIVPB	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	610-690	713-756					
PENV_FIVSD	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	601-688	713-754					
PENV_FIVT2	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	60-122	609-689	714-755				
PENV_FLVCG	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	497-549	561-595					
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	478-530	542-576					
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	498-550	562-596					
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	475-527	538-573					
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	1-41	134-205	321-355	563-693	866-903		
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	498-550	562-596					
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	478-530	542-576					
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	481-524	545-579					
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	498-532						
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	533-575	587-621					
PENV_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	321-383						
PENV_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	316-383						
PENV_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	317-377						
PENV_HTLV2	ENV POLYPROTEIN PRECURSOR	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	317-377						
PENV_HV1A3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	497-593	612-711	766-845				
PENV_HV1B1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	505-594	610-712	767-843				
PENV_HV1B8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH8 ISOLATE)	506-589	605-707	762-838				
PENV_HV1BN	ENVELOPE POLYPROTEIN GP160 PRECURSOR (CONT	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRAIN ISOLATE)	331-365	501-590	609-708	763-831			
PENV_HV1BR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	510-599	615-717	772-841				
PENV_HV1C4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	342-376	510-606	626-724	779-855			
PENV_HV1EL	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	335-396	502-591	607-709	768-829			
PENV_HV1H2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	505-594	610-712	767-836				
PENV_HV1H3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB3 ISOLATE)	505-594	610-712	767-843				
PENV_HV1J3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JH3 ISOLATE)	343-377	517-605	622-723	778-843			
PENV_HV1JR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	329-363	497-586	603-704	759-835			

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PENV_HV1KB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	88-122	338-372	511-545	555-599	618-677	681-718	772-845	
PENV_HV1MA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	259-300	507-596	617-714	770-825				
PENV_HV1MF	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	503-592	622-710	765-841					
PENV_HV1MN	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	336-370	506-595	617-713	774-841				
PENV_HV1NS	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	326-360							
PENV_HV1ND	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	495-584	601-702	757-825				
PENV_HV1OY	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	336-370	497-593	610-711	766-842				
PENV_HV1PV	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	505-594	610-712	767-843					
PENV_HV1RH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	344-378	507-603	619-721	776-852				
PENV_HV1S1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	496-585	602-703	758-830					
PENV_HV1SJ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	332-366	494-590	607-708	763-837				
PENV_HV1SC	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	331-365	498-594	611-712	767-834				
PENV_HV1WI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	331-365	498-594	611-712	767-836				
PENV_HV1W2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	327-361	489-584	602-703	758-827				
PENV_HV1Z2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	255-296	502-591	610-709	764-831				
PENV_HV1Z3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-292							
PENV_HV1Z6	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-297	504-593	609-711	766-840				
PENV_HV1Z8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	266-307	512-601	617-675	682-719	774-831			
PENV_HV1ZH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOL	522-594	612-671	675-712	777-839				
PENV_HV2BE	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	447-481	510-595	617-680					
PENV_HV2CA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	512-597	619-709						
PENV_HV2D1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	501-586	608-698						
PENV_HV2G1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	439-473	502-587	609-699					
PENV_HV2NZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	488-587	609-699						
PENV_HV2RO	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	511-596	618-708						
PENV_HV2S2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24.IC#	442-476	505-590	612-702					
PENV_HV2SB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	526-588	614-700						
PENV_HV2ST	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	505-590	612-702					
PENV_IPMAE	ENV POLYPROTEIN PRECURSOR	MOUSE INTRACISTERNAL A-PARTICLE	367-422	465-527						
PENV_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	403-455	571-605						
PENV_MCFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-525	537-571						
PENV_MCFF3	ENV POLYPROTEIN PRECURSOR (COAT POLYPROTE	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLA	474-526	538-572						
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	503-555	567-601						
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	498-550	562-596						
PENV_MLVFS	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	520-564	576-610						
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	520-564	576-610						
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	520-564	576-610						
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOKUTU MURINE LEUKEMIA VIRUS	504-551	563-597						
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-92	104-138						
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	502-554	566-600						
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	497-549	561-595						
PENV_MLVRK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-549	561-595						
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	477-539	556-612						
PENV_MMTVG	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	477-539	556-612						
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	408-474							
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	43-95	107-141						
PENV_OMVVS	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	22-64	185-223	664-746	780-816				
PENV_RMCFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	484-528	540-574						
PENV_RSFFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER SPLEEN FOCUS-FORMING VIRUS	342-376							
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	1-41	101-140	154-205	321-355	563-651	658-693	1866-904	
PENV_SFV3L	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	5-46	158-209	319-357	560-706	863-901			
PENV_SIVA1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	269-310	551-623	643-691					

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PENV_SIVAG	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	556-628	651-699	808-852					
PENV_SIVAI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	257-291	336-370	535-607	627-684	792-840			
PENV_SIVAT	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	264-298	549-621	644-692	796-833				
PENV_SIVCZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	253-291	330-365	512-584	669-703	803-837			
PENV_SIVGB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	566-634	677-725						
PENV_SIVM1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	114-151	465-496	528-613	635-725	809-844			
PENV_SIVM2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	71-109	161-219	245-286					
PENV_SIVMK	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	464-505	549-612	638-724					
PENV_SIVML	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	464-505	540-612	638-724					
PENV_SIVS4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SM14 ISOLATE)	466-509	517-616	618-728	812-853				
PENV_SIVSP	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/DC13 ISOLATE)	470-513	521-620	642-732	811-848				
PENV_SMRVH	ENV POLYPROTEIN PRECURSOR	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	400-466							
PENV_SRVI	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	409-475							
PENV_VILV	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514)	21-62	184-222	637-740	773-809				
PENV_VILV1	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	21-62	184-222	643-746	780-816				
PENV_VILV2	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	21-62	184-222	645-748	782-818				
PERBA_AVIER	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	106-140							
PETF1_FOWP1	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	190-224	553-587						
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	37-71	267-340	550-587					
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-71	307-341						
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	23-71	307-341						
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	52-97	174-208						
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	52-97	174-208						
PEXON_HCMVA	ALKALINE EXONUCLEASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-114							
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-141							
PEXON_PRVNJ	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	82-120							
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-157	342-383						
PFIB2_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	182-237							
PFIB2_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	182-223							
PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	156-194							
PFIBP_ADE07	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 7	176-210							
PFIBP_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352							
PFIBP_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	320-366							
PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	181-215	585-626						
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	131-169							
PFOS_AVINK	P55-V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24	109-152							
PFOS_MSVFB	P55-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	155-193							
PGAGC_AVISC	P47(GAG-CRK) PROTEIN	AVIAN SARCOMA VIRUS (STRAIN CT10)	57-101							
PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	57-94							
PGAG_AVEV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	6-43							
PGAG_AVMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	57-94							
PGAG_AVMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1CBI	57-94							
PGAG_AVISU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	57-94							
PGAG_AVISY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	57-94							
PGAG_BIV06	GAG POLYPROTEIN (P53)	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	1-41							
PGAG_EIAVY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	61-118							
PGAG_FIVPE	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	76-110							
PGAG_FIVSD	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	76-110							
PGAG_FIVT2	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	76-110							
PGAG_FLV	GAG POLYPROTEIN	FELINE LEUKEMIA VIRUS	496-537							
PGAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	130-186	391-425	439-480	607-655				
PGAG_FSVMD	GAG POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	499-534							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
TILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PGAG_FUSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	57-94							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	393-444							
PGAG_HVIA3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	87-133	294-328						
PGAG_HVIB1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	90-131	292-326						
PGAG_HVIB5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	90-131	292-326						
PGAG_HVIBR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	90-131	292-326						
PGAG_HVIC4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	90-131	292-326						
PGAG_HVIEL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	90-131	292-326						
PGAG_HVIH2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	90-131	292-326						
PGAG_HVIJJ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	87-131	292-326						
PGAG_HVIJR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	87-131	292-326						
PGAG_HVIMA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	90-137							
PGAG_HVIMN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	87-134	295-329						
PGAG_HVINS	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	90-131	292-326						
PGAG_HVIND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	87-128	289-323						
PGAG_HVIOY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	90-131	292-326						
PGAG_HVIPV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	90-131	292-326						
PGAG_HVIRH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	90-131	292-326						
PGAG_HVIU4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	87-127							
PGAG_HVIW2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	292-326							
PGAG_HVIZ2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	87-132	293-327						
PGAG_HV2SB	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	292-326							
PGAG_IPHA	RETROVIRUS-RELATED GAG POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	93-127	320-357						
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	67-103							
PGAG_IPMAE	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	89-133	138-172						
PGAG_JSRV	GAG POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	470-504							
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	83-151	156-190						
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	83-151	156-190						
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	222-260							
PGAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	57-94							
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A (SCV-L-A)	102-139	490-531						
PGAG_SFVI	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	128-177	378-416	583-614					
PGAG_SFV3L	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	373-407	435-522	591-632					
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	302-336							
PGAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	306-340							
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	183-217	473-507						
PGAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	302-336							
PGAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	301-335							
PGAG_SIVGB	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	163-204	223-267	283-317					
PGAG_SMSAV	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	394-431							
PHELI_HSV11	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	172-206	769-820						
PHELI_HSV2H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	468-502	670-721						
PHELI_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	158-203	413-449	599-633					
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	445-517	782-821						
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	208-242							
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-242							
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-242							
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	208-242							
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	208-242							
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	380-456							
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	364-440							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	378-454							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	378-454							
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	108-142	375-475	494-528					
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	360-452	487-532						
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/	360-452	487-532						
PHEMA_IACKS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	377-469	504-549						
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	112-146	377-469						
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	378-454							
PHEMA_IADA2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	377-476	495-547						
PHEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/78/76)	380-453							
PHEMA_IADA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	379-478	506-548						
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-454							
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-55	377-472						
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	364-440							
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	364-440							
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	364-440							
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	364-440							
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	364-440							
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/85)	364-440							
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	364-440							
PHEMA_IADIR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/83)	379-471	506-551						
PHEMA_IADM1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76	21-55							
PHEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	380-456							
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-55							
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-454							
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-55							
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	380-456							
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77	380-456							
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	377-477							
PHEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-454							
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-473							
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	377-476							
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	379-455							
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	112-146	360-484	503-537					
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/73)	112-146	360-484	503-537					
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C.DETROIT/1/64)	360-484	503-537						
PHEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	360-484	503-537						
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	379-455							
PHEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	379-455							
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	379-455							
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	112-146	360-484	503-537					
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	112-146	360-484	503-537					
PHEMA_IAHMI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63	379-455							
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	379-455							
PHEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	112-146	360-484	503-537					
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	112-146	360-484	503-537					
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	379-455							
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	379-455							
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	112-146	360-484	503-537					
PHEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/137/72)	112-146	360-484	503-537					
PHEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	379-455							
PHEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	379-455							
PHEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	379-455							

BAD ORIGINAL

PCGENE	ALLMOTIFS	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
ID & NAME	PROTEIN	VIRUS							
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57	375-467	503-547					
PHEMA_IAJKE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	376-478	506-541					
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	376-478	506-548					
PHEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	377-453						
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	382-458						
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	380-456						
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	380-456						
PHEMA_IAME3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	380-440						
PHEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	108-142	375-475					
PHEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	380-456						
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ANT/60/68)	378-477	496-534					
PHEMA_IAPU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-478	506-548					
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-434						
PHEMA_IAUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDDY TURNSTONE/NEW JERSEY/1985)	378-434						
PHEMA_IAS83	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/83)	378-434						
PHEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	379-474	506-532					
PHEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/5156/85)	112-146	377-469					
PHEMA_IATK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	379-471	506-551					
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	378-434						
PHEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	392-470	504-548					
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/61168/81)	378-434	493-540					
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	30-64	374-474					
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1966)	371-472	487-539					
PHEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	21-55						
PHEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-478	506-548					
PHEMA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	381-457						
PHEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	375-477	505-547					
PHEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	380-436						
PHEMA_IAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	364-440						
PHEMA_IAZH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	364-440						
PHEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1126/83)	364-440						
PHEMA_IAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	379-478	506-548					
PHEMA_IAZN1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	379-478	506-547					
PHEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKKEL/1/84	380-436						
PHEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87	388-473						
PHEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/1/1)	378-463						
PHEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	386-471						
PHEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	381-463						
PHEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	387-472						
PHEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	377-462						
PHEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/66)	381-468						
PHEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	386-471						
PHEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	386-471						
PHEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	379-464						
PHEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	381-466						
PHEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	388-473						
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	483-571						
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/81)	471-559						
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	471-559						
PHEMA_INCHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	470-558						
PHEMA_INCJN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	484-572						
PHEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/82)	470-558						

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	470-558							
PHEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NARA/82)	470-558							
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	471-559							
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	471-559							
PHEMA_INCP3	MEASLES VIRUS (STRAIN HALLE)	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	471-559							
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47	471-559							
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	471-559							
PHEMA_MEASE	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN EDMONSTON)	46-90							
PHEMA_MEASH	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN HALLE)	46-90							
PHEMA_MEASI	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN IP-3-CA)	46-87							
PHEMA_MEASY	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN YAMAGATA-1)	46-87							
PHEMA_MUMP1	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1	34-99							
PHEMA_MUMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	34-99							
PHEMA_MUMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	34-99							
PHEMA_MUMPS	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	34-99							
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	8-52	477-529						
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	1-49							
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	1-52							
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	1-52							
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	1-52							
PHEMA_NDVTG	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B/48)	1-49							
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	1-52							
PHEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-73							
PHEMA_PI1HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	66-110							
PHEMA_PI2H	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS	247-281							
PHEMA_PI2HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	247-281							
PHEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	38-93							
PHEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	13-110	394-428						
PHEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/124854/74)	20-110	394-428						
PHEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	13-110	394-428						
PHEMA_PI3HU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	13-110	394-428						
PHEMA_PI3HV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/81)	13-110	394-428						
PHEMA_PI3HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	13-110	394-428						
PHEMA_PI3HX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/73)	13-110	394-428						
PHEMA_PI4HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	34-88							
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POXVIRUS	166-214	256-290						
PHEMA_RINDK	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KABETE O)	46-87							
PHEMA_RINDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	46-87	191-225						
PHEMA_SEND5	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	57-110							
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSIIIMI)	57-110							
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	57-110							
PHEMA_SENDJ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	57-110							
PHEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	57-110							
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	18-52	387-421						
PHEMA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN WJ)	27-82							
PHEMA_SV5LN	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE HUMAN/LN)	27-82							
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	177-211							
PHEX3_ADE02	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	90-134							
PHEX3_ADE05	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	90-134							
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	85-134							
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-134							
PHEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7, AND HUMAN ADENOVIRUS TYPE	93-138							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEX9_ADE12	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 12	88-137							
PHEX9_ADE41	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 41	67-126							
PHEX9_ADEC2	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	53-103							
PHEX9_ADENT	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	61-109							
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	341-386	433-467	583-624					
PHEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	330-379							
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352	408-449	553-587					
PHEX_ADE41	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 41	306-355	555-589						
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	301-346	385-419	544-578	705-739				
PHRG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	320-395	455-489						
P1226_ASFB7	LATE PROTEIN L226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	110-151							
PIBMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	3-44	378-419						
PIBMP_CAMVB	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BARI 1)	379-420							
PIBMP_CAMVC	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	3-37	378-419						
PIBMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	3-44	378-419						
PIBMP_CAMVE	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DDC)	3-37	378-419						
PIBMP_CAMVJ	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN S-JAPAN)	3-37	378-419						
PIBMP_CAMVN	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	3-37	378-419						
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	3-37	378-419						
PIBMP_CAMVS	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	3-37	378-419						
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	3-37							
PIBMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	1-51	372-406						
PIBMP_SOCMV	INCLUSION BODY MATRIX PROTEIN		1-48	132-179						
PIC18_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	53-98	290-324	498-532					
PIC18_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	331-365							
PIC18_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	331-365							
PIC18_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	324-362							
PIC18_HSVB2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	466-500							
PIC18_HSVEB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS TYPE 1 (ISOLATE HVS23A)	341-375							
PIC18_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	58-99	361-395						
PIC18_MCMVS	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	60-112	290-340	647-691					
PIC18_PRVIF	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	299-333	303-337						
PICP0_HSVBJ	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN JURA)	190-224							
PICP0_HSVBK	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN K22)	190-224							
PICP4_HSVMG	TRANS-ACTING TRANSCRIPTIONAL ACTIVATOR PR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	1022-1056							
PICP4_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	920-954							
PIE63_HCMVA	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	207-241							
PIE63_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	241-275							
PIE63_HSVEB	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	282-316							
PIE63_VZVD	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	195-229	258-306						
PIE68_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	87-121							
PIE68_HSVEB	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	99-133							
PIE68_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	48-85							
PIR05_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13-47							
PIR12_HCMVA	HYPOTHETICAL PROTEIN IRL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-162							
PKABL_FSVHY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 2)	280-314							
PKABL_MLVAB	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	ABELSON MURINE LEUKEMIA VIRUS	217-251							
PKAKT_MLVAT	AKT KINASE TRANSFORMING PROTEIN	AKT8 MURINE LEUKEMIA VIRUS	172-227	263-304						
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	23-64	104-178						
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	218-252							
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	313-362	638-679	812-849					
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRCII)	65-99							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
TITLE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PKFPS_FUJSV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	65-99	152-251	348-398					
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	47-81							
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1	38-82							
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	228-262	431-472						
PKITH_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	90-124							
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	90-124							
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	90-124							
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	90-124							
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	90-124							
PKITH_HSV23	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	91-125							
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 1 (STRAIN WC11)	616-665							
PKITH_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	19-53	178-219						
PKITH_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	19-53	178-230						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	180-214							
PKITH_HSVMR	THYMIDINE KINASE	MARMOSET HERPESVIRUS	52-86							
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	337-389							
PKITH_PRVNJ	THYMIDINE KINASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	161-202							
PKMIL_AVIMH	MIL SERINE/THREONINE-PROTEIN KINASE TRANSF	AVIAN RETROVIRUS MH2	69-103							
PKR1S_HSV11	GENE 1S PROTEIN KINASE	ICTALURID HERPESVIRUS 1	190-224							
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	57-91	281-315						
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	487-528	597-631						
PKRAF_MSV36	RAF SERINE/THREONINE-PROTEIN KINASE TRANSF	MURINE SARCOMA VIRUS 3611	11-45							
PKRB1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	127-168							
PKRB1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	127-168							
PKRB1_VARV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	123-171							
PKRB2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-181							
PKRB2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-181							
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	169-203							
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	136-170							
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	169-203							
PKROS_AVISU	ROS TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	111-145							
PKRYK_AVIRJ	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN RETROVIRUS RPL30	15-66							
PKTHY_VACCV	THYMIDYLATE KINASE	VACCINIA VIRUS (STRAIN WR), (STRAIN COPENHAGEN)	135-169							
PKYES_AVISY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN Y73)	174-233							
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	441-475							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	223-264							
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-232	408-442						
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	199-233							
PLS2_ADE02	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	238-284	301-349						
PLS2_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	238-284	301-349						
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	144-179	294-338						
PMCEL_SFVKA	MRNA CAPPING ENZYME	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-152	622-656						
PMCEL_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41	623-657						
PMCEL_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	1-41	623-657						
PMCEL_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	1-39	623-657						
PMCES_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-137	245-286						
PMCES_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	72-137	245-286						
PMCES_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	72-137	245-286						
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	116-157	279-313	738-772					
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	26-66							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	29-66							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PMOVP_TMVTO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	32-66							
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L1IA)	32-80							
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L1I)	32-80							
PMTCI_CHVN1	MODIFICATION METHYLASE CVIBI	CHLORELLA VIRUS NC-1A	222-256							
PMTCI_CHVP1	MODIFICATION METHYLASE CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	116-164							
PMYC_AVDM2	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	229-266	375-419						
PMYC_AVDMC	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	230-267	376-420						
PMYC_AVDMD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1ID1	230-267	376-420						
PMYC_AVDME	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	377-421							
PMYC_AVIOK	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	224-261	370-414						
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-437							
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-437							
PNCA2_CVMA5	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	12-46							
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	177-211							
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	46-83	122-156						
PNCAP_BRSVA	NUCLEOCAPSID PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	62-108	163-200	248-303	343-383				
PNCAP_BUNGE	NUCLEOCAPSID PROTEIN	BUNYAVIRUS GERMISTON	176-228							
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	176-229							
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	176-229							
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	175-228							
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C680)	223-306	427-461						
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	137-174	179-217	354-402					
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653514)	40-84	321-369						
PNCAP_CVBF	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN F15)	349-383							
PNCAP_CVBM	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	349-383							
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	165-227							
PNCAP_CVHOC	NUCLEOCAPSID PROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	349-383							
PNCAP_CVMJH	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	12-46							
PNCAP_CVPFS	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	149-206							
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	165-227							
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRIT	149-228							
PNCAP_CVPRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	149-228							
PNCAP_CVRSD	NUCLEOCAPSID PROTEIN	RAT CORONAVIRUS (STRAIN 681)	12-46							
PNCAP_CVTKE	NUCLEOCAPSID PROTEIN	TURKEY ENTERIC CORONAVIRUS	349-383							
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	230-306							
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	151-206							
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	1-35	40-74	333-381					
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC280)	233-297							
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	62-145	163-200	248-303	343-380				
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	62-145	163-200	248-303	343-380				
PNCAP_IBVG	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN GRAY)	186-227							
PNCAP_IBVK	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	186-220							
PNCAP_JUNIN	NUCLEOCAPSID PROTEIN	JUNIN ARENAVIRUS	96-151							
PNCAP_LASSO	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	65-113	126-174						
PNCAP_LASSI	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	65-113	122-174	467-504					
PNCAP_LDV	NUCLEOCAPSID PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS(	3-40							
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	43-117	460-497						
PNCAP_LYCVW	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	43-79	83-117	460-497					
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	175-228							
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	188-226	363-411						
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	188-226	363-411						
PNCAP_MEASI	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN IP-1-CA)	188-226	363-411						

BAD ORIGINAL

PCGENE	ALLNOTES	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	188-226	363-411					
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	65-106	471-505					
PNCAP_MUMPI	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	214-255	500-534					
PNCAP_MUMTM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-255						
PNCAP_PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	1-35	40-74	333-392				
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	212-272	441-510					
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	212-272	441-510					
PNCAP_PIIHT	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	214-266	344-378					
PNCAP_PIIB	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	200-403	446-490					
PNCAP_PIIH4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	83-135	208-266	344-403	440-491			
PNCAP_PIIHA	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	38-94	191-247					
PNCAP_PIIHB	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 88-???)	38-94	191-247					
PNCAP_PIARV	NUCLEOCAPSID PROTEIN	PICHINDE ARENAVIRUS	65-112						
PNCAP_PIRYV	NUCLEOCAPSID PROTEIN	PIRY VIRUS	71-116	325-359					
PNCAP_PUUHH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	1-35	40-75	333-395				
PNCAP_PUUHS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	1-35	40-75	333-385				
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	91-141	248-301	344-398				
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-187						
PNCAP_SENDS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	212-272	345-404					
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	212-272	345-404					
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	212-272	345-408					
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	1-35	40-74	333-381				
PNCAP_SIVI	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	215-267	372-406	418-466				
PNCAP_SYNV	NUCLEOCAPSID PROTEIN	SONCHUS YELLOW NET VIRUS	332-366						
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACAIBE VIRUS	50-84	230-264					
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	215-249						
PNCAP_TSWVB	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIII/BR	79-120						
PNCAP_TSWVH	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (HAWAIIAN ISOLATE)	79-120						
PNCAP_TSWVL	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	79-120						
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	51-102						
PNCAP_VHSVD	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	249-335						
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARAH)	142-180	249-335					
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	42-108						
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	62-115						
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	42-115						
PNEF_HV2BE	NEGATIVE FACTOR	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	7-48						
PNEF_HV2D1	NEGATIVE FACTOR	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	7-41						
PNEF_HV2RO	NEGATIVE FACTOR	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	113-169						
PNEF_HV2SB	NEGATIVE FACTOR	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	109-150						
PNEF_HV2ST	NEGATIVE FACTOR	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	108-149						
PNEF_SIVAI	NEGATIVE FACTOR	SIMIAN PARAINODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	96-140						
PNEF_SIVS4	NEGATIVE FACTOR	SIMIAN PARAINODEFICIENCY VIRUS (F236S4H4 ISOLATE)	9-43	233-267					
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/7	47-81						
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CANVELA/MONGOLIA/3)	33-74						
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	50-91						
PNRAM_IACKQ	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370	149-383						
PNRAM_IACKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1159	149-383						
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	14-48						
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	14-48	184-229					
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/1/74	10-47	193-237					
PNRAM_IAKRI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-44	361-402					
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/19/79)	50-91						

BAD ORIGINAL

FCGENE	ALLMOTIFS	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILE_NAME	PROTEIN	VIRUS	50-91							
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	50-91							
PNRAM_IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/AEMPHIS/1/71(H-A/BELLA/1/92))	49-91							
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	49-91							
PNRAM_IASHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	10-44							
PNRAM_IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	7-41							
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	49-83							
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-91							
PNRAM_IAWHO4	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/ANTARCTIC/1/84)	49-91							
PNRAM_INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	5-46	348-382						
PNRAM_INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	5-46	349-383						
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	5-46	349-383						
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)(STRAIN BA	5-39	348-382						
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	5-39	349-383						
PNRAM_INBMF	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/NEW JERSEY/5/76)	5-46	348-382						
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	5-46	349-383						
PNRAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	5-39	349-383						
PNRAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	5-39	349-383						
PNRAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	5-39	348-382						
PNSI_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	790-828							
PNSS_INSVN	NON-STRUCTURAL PROTEIN	INFATIENS NECROTIC SPOT VIRUS (STRAIN HL-9))	95-129	204-238						
PNSS_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH/BR	3-37							
PNSS_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	3-37							
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69	110-144						
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-169	415-449	514-555					
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	56-90	248-289	548-599					
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	56-90	248-289	548-599					
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	134-195	455-505						
PP100_HSV4U	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	188-221	689-735						
PPAP1_VACCC	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-180							
PPAP1_VACCV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	121-180							
PPAP1_VARV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VARIOLA VIRUS	121-180							
PPAP3_CAPVK	POLY(A) POLYMERASE REGULATORY SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	112-146							
PPAP3_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	95-134							
PPAP2_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	201-249							
PPAP2_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	201-249							
PPAP2_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	201-249							
PPE12_NPVAC	12.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-56	60-105						
PPE12_NPVOP	11.5 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	11-98							
PPE18_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	19-77	193-249						
PPE18_NPVOP	MAJOR IMMEDIATE EARLY PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	190-240							
PPE18_NPVAC	48.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-42	48-89	97-131					
PPE18_NPVOP	47.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	47-82	185-199						
PPEV2_ADE07	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	414-448							
PPIV2_ADE07	PROTEIN V1 PRECURSOR	HUMAN ADENOVIRUS TYPE 2	37-71							
PPIV6_ADE05	PROTEIN V1 PRECURSOR	HUMAN ADENOVIRUS TYPE 5	37-71							
PPOL1_BAYMO	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	323-363	741-777	951-991	1165-1199	2229-2264	2309-2332	2168-2404	
PPOL1_BAYMO	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	329-363	671-705	741-777	937-994	1165-1199	2227-2264	2107-2330	2366-2402
PPOL1_GCMV	GENOME POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	120-161	165-216	220-273	372-415				
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	170-212	488-519	636-677	691-725	1137-1196	1378-1412	1906-1941	
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	223-270	928-977						
PPOL1_TSVR	RNA1 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	181-206							
PPOL2_BAYMO	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	669-732	739-771	787-828				

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL3_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN H-1)	669-732	739-773	787-828					
PPOL3_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	365-406	542-602						
PPOL3_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	4-38							
PPOL3_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	158-206	334-368						
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	849-886	1008-1064	1382-1416	1459-1507	1576-1617			
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHŒA VIRUS (ISOLATE NADL)	244-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1869-1910	2226-2260
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHŒA VIRUS (STRAIN SD-1)	245-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1779-1820	2136-2170
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-130							
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	9-43	562-596	664-698	1045-1100	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	15-49	1040-1086	1895-1940					
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	15-49	1021-1067	1876-1921					
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	15-49	1024-1070	1879-1924					
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	15-49	642-681	1022-1068	1877-1922				
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	15-49	1024-1070	1879-1924					
PPOLG_CYVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	120-154							
PPOLG_DEN1B	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN 836-1)	74-108							
PPOLG_DEN1A	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN AUS 82-80)	74-108							
PPOLG_DEN1C	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN CV1636/77)	74-108							
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	74-108	832-873	960-994	1142-1179	1386-1420	1614-1648	2518-2554	2946-3016
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	74-108	833-874	961-995	1143-1180				
PPOLG_DEN21	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	448-492							
PPOLG_DEN22	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M2)	448-495							
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2485-2551
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	728-777							
PPOLG_DEN2H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TH-36)	497-546							
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	213-247	398-432						
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	74-108	728-777	832-875	961-995	1146-1180	1246-1280	1418-1452	1615-1649
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	448-497	552-595	681-715	866-900	966-1000	1205-1239		
PPOLG_DEN2U	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PUO-218)	614-663							
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	830-872	959-993	1385-1419	2224-2258	2480-2521	2704-2738	2940-2978	2980-3014
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	957-993	1380-1414	2514-2555	2701-2735	2941-2975	2977-3011		
PPOLG_ECI1G	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	213-259	1079-1113						
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1074-1115	1472-1518	1522-1570	1665-1706	1789-1823			
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETO	145-179	1076-1117	1474-1520	1524-1572	1667-1708			
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGEN	145-179	1076-1117	1474-1520	1524-1572	1667-1708			
PPOLG_ENMG3	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	145-179							
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	78-112							
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	221-255	294-328	578-612	1103-1153	1493-1528	2165-2200		
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	220-254	293-327	577-611	1103-1164	1493-1528	2164-2199		
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	221-255	1103-1153	1493-1528	2164-2199				
PPOLG_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU (C-S	87-128	693-728						
PPOLG_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	221-255	283-317	577-611					
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	364-398							
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	440-493	626-660	695-729	1033-1070	1190-1235	1307-1343	1779-1820	2136-2170
			2466-2500	2525-2559	2667-2708	3057-3098	3152-3193	3406-3440		
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	440-493	626-660	695-729	1033-1070	1173-1235	1779-1820	2136-2170	2388-2436
PPOLG_HCVBK			2466-2500	2525-2559	2667-2708	3057-3098	3152-3195	3406-3440	3521-3562	
PPOLG_HCVE0	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	357-398	2328-2365						
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC10)	65-99							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLG_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	364-398							
PPOLG_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	364-398							
PPOLG_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	236-270							
PPOLG_HCVHK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	248-282							
PPOLG_HCVJ2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-KF)	357-398							
PPOLG_HCVJ5	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J2)	357-398							
PPOLG_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	364-398							
PPOLG_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	364-401	1716-1750	2082-2116					
PPOLG_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	364-398							
PPOLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	364-398	1716-1750	2082-2116	2468-2502	2538-2572			
PPOLG_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	357-405	2331-2365						
PPOLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	357-391	2331-2365						
PPOLG_HPAV2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	357-398	2328-2365	2444-2503					
PPOLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLG_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLG_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLG_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	2-43	101-135	203-237					
PPOLG_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	80-114	182-216						
PPOLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	2-43	101-135	203-237	870-904	1021-1055	1103-1151		
PPOLG_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	2-43	101-135	203-237	870-904	1021-1055	1103-1151		
PPOLG_HPAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	2-43	101-135	203-237	870-904	1021-1055	1103-1158		
PPOLG_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	6-47	105-139	207-241	849-908	1025-1059	1115-1155	1158-1198	
PPOLG_HRV14	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	2-43	101-135	203-237					
PPOLG_HRV1A	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1020-1054	1393-1427	1479-1513	1877-1920				
PPOLG_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	362-396							
PPOLG_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	387-421	863-904	1133-1168					
PPOLG_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	856-897	1126-1169	1552-1593					
PPOLG_HUEV7	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1566-1607							
PPOLG_IBDVO	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	359-397	876-917	1032-1088	1403-1441	1896-1934			
PPOLG_JAEV1	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	134-168	250-291	475-524					
PPOLG_JAEV5	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	74-128	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_KUNJM	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	7-48	138-183	467-504	908-942	1337-1378			
PPOLG_LANVT	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	74-108	207-251	851-885	2464-2498	2528-2579	2740-2778	3325-3359	3389-3423
PPOLG_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	68-102	431-465	962-996	1431-1472	1932-1966	2536-2591	2967-3001	3003-3037
			3102-3145							
PPOLG_LIV	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	68-102	431-465						
PPOLG_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	68-123	231-272	431-465					
PPOLG_MCFA	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 526)	151-185							
PPOLG_MVEV	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	80-114	908-942	2049-2087	2630-2689	3036-3095	3290-3341		
PPOLG_OMV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	67-115	209-253	853-887	979-1013	1408-1449			
PPOLG_PEMVC	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	481-515	946-984	1072-1106					
PPOLG_POL1M	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	55-100	207-248	377-411	704-738	827-862	877-947	1021-1055	1167-1201
			1488-1529	1787-1821	1948-1982	2202-2236	2258-2310	2805-2839	3003-3037	
PPOLG_POL1S	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1046-1101	1414-1448	1500-1548	1806-1840	1902-1947		
PPOLG_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	9-43	899-933	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949
PPOLG_POL2W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	9-43	897-931	1045-1100	1413-1447	1502-1547	1608-1649	1806-1840	1902-1947

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
TILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLG_POL32	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	9-43	897-931	1045-1100	1413-1447	1503-1547	1608-1649	1806-1840	1902-1947
PPOLG_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23127)	9-43	896-930	1044-1098	1412-1446	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_PPVD	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PJLEON037 AND PJLEON 12A[1]B)	9-43	896-930	1044-1099	1412-1446	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	164-208	441-503	728-769	815-867	921-955	1741-1782		
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	116-157	784-818	1146-1197					
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	164-208	403-437	440-502	727-768	814-873	920-954	1740-1781	
PPOLG_PRSVH	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	164-208	403-437	440-502	727-768	814-866	920-954	1740-1781	
PPOLG_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA)	68-102	434-468						
PPOLG_PSBMV	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA 5-1)	325-359							
PPOLG_PVYC	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	325-359							
		PEA SEED-BORNE MOSAIC [redacted] (STRAIN DPD1)	253-315	335-389	529-589	915-976	984-1018	1080-1177	1588-1627	1808-1860
PPOLG_PVYH1U	GENOME POLYPROTEIN		1971-2015	2379-2413	2712-2746	2870-2907				
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	131-196	701-735	802-836					
		POTATO VIRUS Y (STRAIN HUNGARIAN)	144-181	701-735	802-863	901-949	1401-1441	1492-1526	1728-1772	1777-1818
PPOLG_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	2372-2106							
			140-196	211-245	701-735	802-863	1401-1441	1492-1526	1728-1772	1777-1818
PPOLG_PWVSE	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	1929-1970							
PPOLG_PWVTB	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN SEVERE)	140-196	211-245	701-735	802-856				
PPOLG_PYFVI	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN TIP BRIGHT)	203-237							
PPOLG_STEVM	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	203-237							
PPOLG_SVDVH	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	194-228	1111-1172	1379-1413	1858-1899	1950-1991	2703-2737		
PPOLG_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN H/3'76)	106-143	673-707	739-773	935-1009	1404-1438			
PPOLG_TBEVS	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG27/72)	13-49	1024-1070	1779-1813	1890-1924				
PPOLG_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	13-49	1024-1070	1890-1924					
			66-140	231-272	431-465	1158-1192	1431-1472	1929-1966	2182-2216	2533-2590
PPOLG_TEV	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	2965-2999	3031-3092	3100-3143					
			68-140	231-272	431-465	1158-1192	1431-1492	1932-1966	2536-2591	2967-3001
PPOLG_TMEVB	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (S	TOBACCO ETCH VIRUS	3003-3037	3053-3094	3102-3145					
			73-124	166-222	540-584	720-782	828-925	1148-1192	1416-1460	1494-1535
PPOLG_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN	1668-1702	1747-1781	1792-1826	2395-2434	2787-2821			
PPOLG_TMEVO	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1306-1340	1483-1518	1601-1635					
PPOLG_TUMV	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1304-1338	1481-1516	1599-1663					
PPOLG_TVMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	1306-1340	1483-1518	1601-1635					
PPOLG_WMV2	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	216-259	314-362	494-538	768-839	1443-1477			
			24-68	408-449	667-704	761-813	851-885	969-1017	1031-1072	1643-1677
PPOLG_WNV	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	1686-1725	2316-2374	2701-2749	2814-2848				
PPOLG_YEFVI	GENOME POLYPROTEIN	WEST NILE VIRUS	68-105	202-236						
			74-108	207-231	847-881	973-1007	1413-1447	2461-2495	2533-2576	2727-2775
PPOLG_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	3320-3357	3385-3426						
PPOLG_YEFV8	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2958-2996	3097-3143
PPOLH_POLIM	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899M1)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2958-2996	3097-3143
PPOLN_EEVVT	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	75-116	418-452	525-563	728-768				
PPOLN_FCVC6	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	9-43	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949	
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	245-282	898-932	1045-1079					
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	510-544							
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	4-45	369-410	986-1020	1023-1061				
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	338-379	1139-1177						
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	338-379							
PPOLN_MIDDV	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	338-379	1139-1184						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	337-378	1138-1176						
			923-977							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLN_RHDV	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	899-933	1942-1986	2444-2502					
PPOLN_RRVN	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	188-234	306-347	409-457	1657-1716				
PPOLN_RRVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	895-929	1928-1962	2414-2467					
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	597-631	1083-1136						
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	1506-1540	1551-1585	1730-1767	1862-1896				
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1094-1128	2358-2392						
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	919-971	1491-1525	1961-1996	2444-2478				
PPOLR_EPMV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1491-1525	1959-1994	2442-2476					
PPOLS_EEEV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	899-933	1127-1161						
PPOLS_EEEVJ	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	372-406	914-951						
PPOLS_EEVVB	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA33[TEN BRO	373-407	915-952						
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1216-1250							
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	1216-1250							
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	134-168	231-286	470-523					
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	134-168	231-286	470-523					
PPOLS_IBDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	134-168	231-286	470-523					
PPOLS_IBDVP	NONSTRUCTURAL PROTEIN VP4	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	134-168	231-286	304-340					
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	115-149	212-267	451-504					
PPOLS_IPNVJ	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	134-168	249-283	470-523					
PPOLS_IPNVN	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	69-103	723-785						
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	716-786							
PPOLS_RRV2	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	1204-1238							
PPOLS_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN 213970)	35-69							
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	369-403	939-973						
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973							
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	999-1036							
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	999-1036							
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	999-1036							
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	362-396							
PPOLS_SINDW	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	362-396							
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (WILD TYPE SB DERIVED FROM STRAIN AR339)	34-68							
PPOL_BAEVM	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	913-947							
PPOL_BLVAU	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	42-80	676-743	794-832	1001-1042				
PPOL_BLVJ	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	625-673							
PPOL_CAEVC	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	625-673							
PPOL_CAMVD	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	879-934							
PPOL_COYMV	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	177-211							
PPOL_EIAV9	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	87-121	333-367	447-498	838-876	896-930	1310-1351		
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	513-566	1022-1056						
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	513-566	1022-1056						
PPOL_FENV1	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	512-565	1021-1055						
PPOL_FIVPE	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	533-600	623-659	858-899					
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	429-473	606-663						
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	428-473	606-642						
PPOL_FMVD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	428-472	595-662						
PPOL_FOAMV	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-437							
PPOL_GALV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	140-174	217-256	285-326					
PPOL_HTL1A	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	528-562	673-740						
PPOL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	670-711							
PPOL_HTL1A2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE	670-711							
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	501-537	606-664						
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	513-549	639-676						
PPOL_HV1B5	POL POLYPROTEIN									

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	513-549	618-676						
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	513-549	618-676						
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	500-536	626-663						
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	501-537	606-664						
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	505-541	610-668						
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	476-536	601-663						
PPOL_HV1N5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	504-540	609-667						
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	501-537	627-664						
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	500-536	626-663						
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	501-537	606-664						
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	513-549	693-676						
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	500-536	605-663						
PPOL_HV1Z3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	500-536	601-663						
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	500-536	626-663						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	49-83	484-582	653-687	817-851				
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	356-390	464-562	632-666					
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	502-600	671-705						
PPOL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205_7)	376-410	484-526	529-577	653-687				
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	464-562	633-667						
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	44-78	356-390	464-529	633-667				
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	357-391	465-563	634-668					
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	46-80	473-562	633-667					
PPOL_IPHA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	484-518	522-577	653-687					
PPOL_JSRV	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	462-503							
PPOL_MLVAK	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	190-231							
PPOL_MLVAV	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	325-392							
PPOL_MLVFS	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	677-744							
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	682-749							
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	682-749							
PPOL_MLVMO	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	682-749							
PPOL_MLVRD	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	677-744							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	677-744							
PPOL_MPMV	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	62-129							
PPOL_OMVVS	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	470-504	578-613						
PPOL_RSVP	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	470-505	855-910						
PPOL_RTBV	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	646-684							
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-96	101-135	176-236	325-362	433-474	1005-1039	1405-1439
PPOL_SFVI	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-96	101-135	176-236	325-362	433-474	1005-1039	1405-1439
PPOL_SFV3L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	349-383	427-464	494-535					
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	124-165	429-467	496-530					
PPOL_SIVA2	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	351-385	617-678	737-771	938-979				
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-86							
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	477-516	642-683	742-783					
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	175-209	476-515	641-700	942-983	1020-1054			
PPOL_SIVCZ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-698	757-798						
PPOL_SIVGB	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	527-561	626-688						
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	9-57	446-483	629-673	793-827	912-946			
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	485-519	654-688						
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	485-519	654-688						
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)	448-482	617-651						
PPOL_SOCMV	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	451-485	620-654						
PPOL_SRVI	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	247-295	372-416						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_VILV	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	470-504	578-613						
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	489-524	874-929						
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	489-524	874-929						
PPP15_HCMVA	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	489-524	874-929						
PPR73_MMTVB	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-150	187-221						
PPR73_MMTVC	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	152-200							
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	20-79							
PPR7L_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	61-93	142-201						
PPR7R_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	145-204	270-311						
PPYHD_CPVBM	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	141-200	266-307						
PPYHD_NPVAC	POLYHEDRIN PRECURSOR	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	13-85							
PPYHD_NPVAS	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVBM	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVBS	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-54							
PPYHD_NPVLD	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVMB	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS V	14-48							
PPYHD_NPVOP	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVPF	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHED	14-48							
PPYHD_NPVSE	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS	14-48							
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN	14-48							
PPYHD_NPVSL	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PRASK_MSVKI	POLYHEDRIN	SPODOPTERA LITTORALIS NUCLEAR POLYHEDROSIS VIRUS	17-51							
PREV_BIV27	TRANSFORMING PROTEIN 21	KIRSTEN MURINE SARCOMA VIRUS	142-176							
PREV_BIVV9	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	77-115							
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	51-89							
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	51-89							
PREV_HV112	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	81-119							
PREV_HV1A2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CLONE 12)	35-69							
PREV_HV1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	32-69							
PREV_HV1B8	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	35-69							
PREV_HV1BN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	25-59							
PREV_HV1BR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-59							
PREV_HV1EL	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	35-69							
PREV_HV1H2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	32-66							
PREV_HV1J3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	35-69							
PREV_HV1JR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH) ISOLATE)	29-63							
PREV_HV1MA	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	31-66							
PREV_HV1MN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	31-66							
PREV_HV1OY	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	31-66							
PREV_HV1PV	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	32-69							
PREV_HV1S3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) AN	35-69							
PREV_HV1SC	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	35-69							
PREV_SIVA1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	32-69							
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	26-77							
PREV_SIVAI	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	26-77							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	29-77							
PREV_SIVCZ	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	28-75							
PREV_VILV	REV PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	33-67							
PRIR1_ASFM2	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	21-62							
PRIR1_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	7-41	88-133	635-683					
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	213-247	689-723						

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-668							
PRIR1_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	76-110							
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HERPESVIRUS SAIMIRI (STRAIN 11)	324-365							
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-402							
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN WR)	367-402							
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARIOLA VIRUS	367-402							
PRIR2_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	223-257							
PRIR2_HSVB9	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EPSTEIN-BARR VIRUS (STRAIN B95-8)	89-137							
PRIR2_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	101-135							
PRIR2_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	106-140							
PRIR2_SFVKA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	HERPESVIRUS SAIMIRI (STRAIN 11)	125-159							
PRIR2_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-132							
PRIR2_VACCP	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN COPENHAGEN)	98-132							
PRIR2_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN L-IVP)	98-132							
PRIR2_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN WR)	98-132							
PRL1_HSV2H	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VARIOLA VIRUS	98-132							
PRP94_VACCV	NEUROVIRULENCE FACTOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	171-212							
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN	116-150	465-540	757-791					
PRPO1_VACCC	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VARIOLA VIRUS	41-75	116-150	465-540	757-791				
PRPO1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	243-291	622-656	754-791	954-988	1006-1057			
PRPO1_VARV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	243-291	622-656	754-791	954-988	1024-1058			
PRPO2_CAPVK	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	243-291	622-656	754-791	954-988	1006-1057			
PRPO2_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	CAPRIPOXVIRUS (STRAIN KS-1)	19-60	114-155	589-630					
PRPO2_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	COWPOX VIRUS	211-245	359-400	833-874					
PRPO2_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	211-245	359-400	833-874					
PRPO4_VACCC	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VARIOLA VIRUS	211-245	359-400	833-874					
PRPO4_VACCV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-116							
PRPO4_VARV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	62-116							
PRPO5_VACCC	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VARIOLA VIRUS	62-116							
PRPO5_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-71							
PRPO5_VARV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	1-71							
PRPO6_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VARIOLA VIRUS	1-71							
PRPO6_VARV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	25-59							
PRPO7_VACCV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VARIOLA VIRUS	25-59							
PRPO7_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	43-93							
PRPOA_LELV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VARIOLA VIRUS	43-93							
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1567	1721-1758	1958-1992	2109-2157				
PRRP1_IAANN	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	1083-1117	1477-1518	1633-1673					
PRRP1_IABEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-242	279-313						
PRRP1_IADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BEIJING/11/56)	171-242	279-313	350-391					
PRRP1_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/DUNEDIN/4/73)	171-242	279-313						
PRRP1_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	171-242	279-313						
PRRP1_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	168-242	279-313						
PRRP1_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	168-242	279-313						
PRRP1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	171-242	279-313						
PRRP1_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	171-242	279-313						
PRRP1_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-242	279-313						
PRRP1_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	171-242	279-313						
PRRP1_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	171-242	279-313						
PRRP1_IAME8	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	171-242	279-313						
PRRP1_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/8/88)	171-242	279-313						
PRRP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	171-242	279-313						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRP1_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	168-242	279-313						
PRRP1_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	171-242	279-313						
PRRP1_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	171-242	279-313						
PRRP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	171-242	279-313						
PRRP1_IAWIS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	168-242	279-313						
PRRP1_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	168-242	279-313						
PRRP1_IAZON	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	187-242	279-313						
PRRP1_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	171-242	279-313						
PRRP1_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	171-242	279-313						
PRRP1_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66)	208-249							
PRRP1_INBLE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE]	208-249							
PRRP1_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	208-249							
PRRP1_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	350-384	648-686	707-752					
PRRP2_IADH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	110-144	177-218						
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	110-144	177-218						
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	110-144	177-218						
PRRP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	110-144	177-218						
PRRP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	110-144	177-218						
PRRP2_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	110-144	177-218						
PRRP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	110-144	177-218						
PRRP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	110-144	177-218						
PRRP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	110-144	177-218						
PRRP2_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	110-144	177-218						
PRRP2_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	110-144	177-218						
PRRP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	110-144	177-218						
PRRP2_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	110-144	177-218						
PRRP2_IASDN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERS	110-144	177-218						
PRRP2_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	110-144	177-218						
PRRP2_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	110-144	177-218						
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	110-144	177-218						
PRRP2_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	110-144	177-218						
PRRP2_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78	110-144	177-218						
PRRP2_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	110-144	177-218						
PRRP2_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	110-144	177-218						
PRRP2_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	110-144	177-218						
PRRP2_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	111-196	349-390						
PRRP2_INBSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	111-196	349-390						
PRRP3_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	111-196	349-383						
PRRP3_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	363-402	473-514	707-755				
PRRP3_IACHI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	363-402	473-514	518-567	707-755			
PRRP3_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	1-42	363-402	473-514	707-755				
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	363-402	473-514	707-755				
PRRP3_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	1-42	363-402	473-514	707-755				
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77	1-42	363-402	473-514	707-755				
PRRP3_IAHK6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	7-41	363-402	473-514	707-755				
PRRP3_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/860)	1-42	363-402	473-514	707-755				
PRRP3_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	363-402	473-514	707-755				
PRRP3_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	1-42	363-402	473-514	721-755				
PRRP3_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	363-402	473-514	707-755				
PRRP3_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	1-42	363-402	473-514	707-755				
PRRP3_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	1-42	363-402	473-514	707-755				
PRRP3_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	1-42	363-402	473-514	707-755				

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPJ_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	1-42	363-402	473-514	707-755				
PRRPJ_IAME8	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	363-402	473-514	707-755					
PRRPJ_IAMT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/8/88)	7-41	363-402	473-514	707-755				
PRRPJ_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	363-402	473-514	707-755				
PRRPJ_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	363-402	473-514	707-755				
PRRPJ_IASE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	1-42	363-402	473-514	707-755				
PRRPJ_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/82)	1-42	363-402	473-514	707-755				
PRRPJ_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	363-402	473-514	707-755				
PRRPJ_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	1-42	363-402	473-514	707-755				
PRRPJ_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	1-42	363-402	473-514	707-755				
PRRPJ_IAZIJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	1-42	363-402	473-514	707-755				
PRRPJ_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	363-402	473-514	707-755				
PRRPJ_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77	7-41	363-402	473-514	707-755				
PRRPJ_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	458-533							
PRRPJ_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	458-533							
PRRPJ_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	235-269	275-309						
PRRPJ_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/JJ/50)	235-269	275-316						
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	THOGOTO VIRUS	343-401							
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	358-392	495-571	1742-1776	1971-2008	3664-3724	3912-3946		
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	617-651	1364-1398	2769-2803	3586-3620	3821-3855	4075-4121	4319-4353	
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	20-64	617-651	943-1009					
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	1129-1170	1303-1337	1453-1494	1692-1726	2629-2670			
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	1129-1170	1303-1337	1453-1494	1690-1724	2627-2668			
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	499-550	650-695	1460-1494	1509-1548	2246-2287			
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	115-156							
PRRPL_BUNYW	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	308-342	705-748	825-903	1021-1076	1114-1201			
PRRPL_CDVO	RNA POLYMERASE	BUNYAMWERA VIRUS	2-36	80-114	308-363	371-412	1704-1741	1802-1861	1889-1935	
PRRPL_HANTV	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	20-54							
PRRPL_HRSVA	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	98-139	174-208	372-431	557-591	655-696	731-783	905-949	1276-1310
			1419-1453	1742-1776	1993-2027					
PRRPL_MABVM	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	87-188	827-861	1131-1179	1185-1220	1465-1517			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	597-631	1046-1092	1490-1552	1804-1838	2029-2063	2194-2266		
PRRPL_MEASE	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	597-631	1046-1092	1490-1552					
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	197-231	790-824	869-903	1064-1109	1283-1317	2121-2155		
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	164-214	220-254	267-304	576-627	752-807	1231-1286	1447-1481	1487-1531
			1566-1600	2191-2225						
PRRPL_PI2HT	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	167-208	230-295	1969-2013	2043-2077	2108-2142			
PRRPL_PI3H4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	136-170	575-628	750-785	1226-1284	1316-1357	1417-1479	1564-1630	1687-1721
			1901-1955							
PRRPL_PUUMH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	48-91	107-163	540-574	747-781	1064-1129	1293-1356	1499-1536	1994-2036
PRRPL_RABVP	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	98-132	381-415	444-488	557-591	655-696	731-783	922-976	1119-1153
			1742-1776	1940-1975	1993-2032					
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	73-114	197-231	696-730	1174-1222	1522-1580	1584-1618	2068-2123	
PRRPL_RDV	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	73-114	197-231	696-730	749-783	1174-1222	1522-1580	1584-2123	
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	17-61	534-575	844-878	918-985	1037-1071			
PRRPL_SEND5	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	398-439	641-678	832-887	1081-1115	1653-1687	1819-1870		
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2146-2216							
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	129-163	360-420	432-476	567-601	884-939	1059-1100	1319-1356	1820-1854
			1966-2036							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPL_SEOU8	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2146-2216							
PRRPL_SV5WR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	98-139	174-208	557-591	653-696	731-765	1742-1776	1947-1981	1993-2027
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	547-627	747-781	1225-1280	1319-1353	1592-1626	1676-1715	2024-2058	
PRRPL_TSWVB	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	760-794	825-859	977-1014	1089-1137	1978-2032	2059-2107		
PRRPL_UUK	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR	46-101	399-433	539-573	589-634	1119-1153	1195-1236	1321-1379	1538-1572
			1684-1725	1857-1898	2073-2127	2156-2200	2206-2247	2315-2368	2378-2419	2809-2843
PRRPL_VSVIH	RNA POLYMERASE	UUKUNIEMI VIRUS	127-183	282-323	836-874	1030-1071	1481-1515	2015-2049	2061-2098	
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-715	720-763	1522-1567	1802-1836			
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-715	720-763	1802-1836				
PRRPO_ACLSV	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	674-715	720-763	1019-1074	1742-1799	2066-2107			
PRRPO_BWYVF	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	228-262	557-596	916-950	1235-1269				
PRRPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	304-341							
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	234-285							
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	234-285							
PRRPO_CARMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	234-285							
PRRPO_CGMVS	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS	93-131							
PRRPO_CIBDV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STR	7-41	387-428	446-480	726-767	1445-1479			
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	384-432	446-484						
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	144-185	266-307	709-757	771-809				
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	147-181	268-407	501-535	750-802				
PRRPO_LYCVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	147-181	366-407	501-535	753-802				
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	301-346	805-886	926-960	1509-1543	2090-2124			
PRRPO_MCMV	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	301-345							
PRRPO_PEAMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	181-215	697-731						
PRRPO_PLRV1	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	321-358							
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1)	336-373	423-457						
PRRPO_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	336-373	423-457						
PRRPO_RCNMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN	321-362	402-454	627-661	862-896				
PRRPO_REOVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	666-700							
PRRPO_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	310-361							
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	310-344							
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	310-361							
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPO_ROTPC	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPO_ROTPO	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	255-299	335-397	476-510	518-620	966-1007		
PRRPO_ROTS1	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	62-96	133-167	336-377	581-631	636-686	690-724	771-842	
PRRPO_SBMV	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	60-96	133-167	535-569	579-631	639-686	690-724	771-805	
PRRPO_SCVLA	PROBABLE RNA-DIRECTED RNA POLYMERASE	SOUTHERN BEAN MOSAIC VIRUS	628-665							
PRRPO_TACV	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	100-134	147-191						
PRRPO_TMGMV	RNA POLYMERASE	TACARIBE VIRUS	155-204	220-278	375-416	484-518	891-925	1030-1081	1285-1319	1981-2015
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	401-449	682-720	765-818					
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE)	3-37	401-453	665-699					
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	3-37	401-453	665-699					
PRRPO_TNVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	3-37	401-453	860-894					

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPP_BRSVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	102-144							
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-158	160-216						
PRRPP_HDSV	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	312-373							
PRRPP_HRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-158	160-216						
PRRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	99-158	160-216						
PRRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-158	160-216						
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	99-158	160-216						
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-374	460-495						
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-374	460-495						
PRRPP_MUMP1	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-374	460-495						
PRRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	149-183	213-275						
PRRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	214-276							
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-276							
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	100-134							
PRRPP_PI1HB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	100-138							
PRRPP_PI1HC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	80-114	313-364	375-437					
PRRPP_PI1HD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	80-114	313-364	375-437					
PRRPP_PI1HE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	80-114	313-364	375-437					
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/830)	66-114	237-271	313-364	375-437				
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	218-281							
PRRPP_PI2B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	218-281							
PRRPP_PI3H4	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	31-130	414-470						
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	410-499							
PRRPP_PI4HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38	222-285						
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	222-285							
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	137-174							
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	93-127							
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	93-127							
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	93-127							
PRRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127							
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19	93-127							
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	313-364	375-447						
PRRPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	323-364	375-447						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	313-364	375-447						
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	313-364	375-447						
PRRPP_SVS	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	313-364	375-447						
PRRPP_SYNV	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-278							
PRRPP_VSVIG	RNA POLYMERASE ALPHA SUBUNIT	SONCHUS YELLOW NET VIRUS	138-173	233-281						
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	3-43							
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN M	3-43							
PRRPP_VSVJO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37							
PRRPP_VSVSJ	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37							
PSPHR_AMEPV	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	3-43							
PSPI2_VACCV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	223-264	361-395						
PSPI3_VARV	SERINE PROTEINASE INHIBITOR	VACCINIA VIRUS (STRAIN WR)	21-86							
PSPIJ_VACCC	SERINE PROTEINASE INHIBITOR 2	VARIOLA VIRUS	21-86							
PSPIJ_VACCV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-167	225-266						
PSPIJ_VARV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN WR)	118-167	225-266						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PSPIA_VACCC	SERINE PROTEINASE INHIBITOR 3	VARIOLA VIRUS	122-171	229-270						
PT3C2_CHVP1	SERINE PROTEINASE INHIBITOR 2 HOMOLOG FIRST	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-65							
PTAA3_VACCV	TYPE II RESTRICTION ENZYME CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	48-85							
PTAG8_FOWPV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS (STRAIN WR, COPENHAGEN, AND VARIOLA VI	95-133	173-207						
PTAG8_VACCV	TRANS-ACTIVATOR PROTEIN FP0	FOWLPOX VIRUS	3-51							
PTAG8_VARV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS (STRAIN WR), (STRAIN COPENHAGEN)	3-51							
PTALA_BFDV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-51							
PTALA_POVBO	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-325	464-498						
PTALA_POVHA	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	303-337	495-537						
PTALA_POVHC	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	464-501	587-621						
PTALA_POVLY	LARGE T ANTIGEN	POLYOMAVIRUS JC	153-187	589-623						
PTALA_POVMJ	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41	206-258	437-478					
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	509-544							
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	507-542							
PTAMI_POVHA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	504-539							
PTAMI_POVMJ	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	339-378							
PTAMI_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	211-245	388-422						
PTAMI_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	192-226	369-403						
PTASM_POVBO	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	192-226	369-403						
PTASM_POVLY	SMALL T ANTIGEN	BOVINE POLYOMAVIRUS	41-85							
PTATR_NPVAC	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41							
PTATR_NPVBM	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	408-442	46-480	489-523					
PTATR_NPVOP	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	413-447	451-485	494-528					
PTAT_SIVAI	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	391-455	511-554						
PTAT_SIVAJ	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	73-109							
PTAT_VILV	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	137-185							
PTAT_VILV1	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514)	28-74							
PTAT_VILV2	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	40-74							
PTCB_FLV	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	40-74							
PTEGP_HSV11	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	279-321							
PTEGP_HSVEA	TEGUMENT PHOSPHOPROTEIN US9	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	27-61							
PTEGP_HSVEB	NONSENSE									
PTEGP_HSVEK	NONSENSE									
PTEGP_HSVSB	NONSENSE									
PTEGU_EBV	NONSENSE									
PTEGU_HCMVA	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	768-802	821-855	938-972	1101-1138	1208-1242	1479-1516	1700-1753	1809-1867
			1870-1916	1920-1954	3108-3149					
PTEGU_HSV11	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	215-249	543-581	700-738	868-909	936-977	1004-1038	1163-1200
			1237-1296	2200-2235						
PTEGU_HSV6Q	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	731-765	801-842	1022-1059	1223-1269	1275-1309	1315-1370	1520-1531	1609-1669
			1673-1714	1749-1783	1820-1854	2670-2704				
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN G5)	30-71	224-262	567-608	712-757	951-1000	1091-1181	1192-1233	1357-1400
PTEGU_HSVSA	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	560-597	635-683	794-848	908-956	1108-1151	1155-1246	1399-1458	1487-1549
			1619-1657	1661-1695	1702-1736	1806-1843	1947-1981			
PTEGU_VZVD	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	520-558	560-598	615-652	672-710	777-822	846-898	948-986	1287-1332
			1434-1502							
PTERM_ADE02	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	657-696	713-747	804-841	933-972	1117-1158	1415-1471	1528-1562	1572-1620
			1633-1705	1719-1756	1943-1986	2727-2761				
PTERM_ADE05	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	490-572							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	490-592							
PTERM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	491-559							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PTJUN_AVIS1	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	443-491	497-538						
PTMAF_AVIS4	TRANSFORMING PROTEIN JUN	AVIAN SARCOMA VIRUS (STRAIN 17)	210-284							
PTOP1_SFVKA	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	247-288	295-340						
PTOP2_ASFB7	DNA TOPOISOMERASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	127-183	269-310						
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	146-180	481-515	601-642	945-979	1038-1093	1123-1162		
PTSIS_SMSAV	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	146-180	480-514	600-641	902-936	944-978	1038-1091	1122-1161	
PTYSY_VZVD	PDGF-RELATED TRANSFORMING PROTEIN P28-SIS	SIMIAN SARCOMA VIRUS	16-71							
PUBIL_NPVOP	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-260							
PUL01_HCMVA	UBIQUITIN-LIKE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	43-80							
PUL03_HSV11	HYPOTHETICAL PROTEIN UL1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	169-203							
PUL03_HSV2H	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	94-128							
PUL03_HSVEB	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	92-126							
PUL04_HSV11	GENE 60 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	70-104							
PUL06_EBV	PROTEIN UL4	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	102-136							
PUL06_HCMVA	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-145	313-347	376-410					
PUL06_HSV11	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	216-250							
PUL06_HSVEB	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	36-94	103-141	294-329	337-371	416-479			
PUL06_HSVSA	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	62-170	357-413	448-503					
PUL06_VZVD	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	90-140	151-194	302-336	364-405				
PUL08_HCMVA	VIRION GENE 54 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	87-131	350-409	704-738					
PUL09_HSVEB	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-50							
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	174-208							
PUL11_HCMVA	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL13_HCMVA	NONSENSE									
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-81	185-227						
PUL14_HSVEB	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	305-343							
PUL14_PRVN3	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	52-96	246-283						
PUL14_VZVD	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	43-95							
PUL16_HSVEB	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-103							
PUL17_HSV6U	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	266-300							
PUL21_HSVEB	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102	239-280							
PUL23_HCMVA	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-78	421-474						
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-253							
PUL24_ILTVT	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39							
PUL25_HCMVA	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88	161-195							
PUL25_HSV11	HYPOTHETICAL PROTEIN UL25	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	255-341	351-399						
PUL25_HSVEB	VIRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	370-411							
PUL25_HSVSA	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-413							
PUL25_ILTVT	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-92	183-231	365-406					
PUL25_VZVD	64.1 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88	38-84	165-206						
PUL31_HCMVA	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	340-388							
PUL31_HSVEB	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	244-285							
PUL31_VZVD	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	153-187							
PUL32_HSVEB	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	163-197							
PUL32_VZVD	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (STRAIN AB1)	342-376							
PUL33_HCMVA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	72-106	296-344						
PUL33_VZVD	G-PROTEIN COUPLED RECEPTOR HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	94-135	309-352						
PUL34_EBV	GENE 25 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	29-63							
PUL34_HCMVA	BFRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-200							
PUL34_HSV11	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	113-147							
PUL35_HCMVA	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	187-221							
PUL37_EBV	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	231-268							

PCGENE	ALLAIOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUL37_HSV11	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	708-742							
PUL37_HSVEB	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	853-891							
PUL37_HSVSA	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	82-137	311-345	614-648	715-750	781-822			
PUL37_VZVD	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	6-65	682-741						
PUL38_HCMVA	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS).	719-753	786-827						
PUL41_VZVD	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	10-51							
PUL42_HSV11	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRU" (STRAIN DUMAS)	330-366							
PUL42_HSVEB	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	134-168	221-263						
PUL43_HCMVA	DNA-BINDING GENE 18 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	138-172							
PUL43_HSVE4	HYPOTHETICAL PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	72-109							
PUL43_VZVD	MEMBRANE PROTEIN UL43 HOMOLOG	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	27-68							
PUL45_HSV1K	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-363							
PUL45_HSV1M	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	96-137							
PUL47_HCMVA	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	96-137							
PUL47_HSV11	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-165	448-485	745-856					
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	473-518							
PUL47_HSVBP	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F	473-518							
PUL47_HSVE4	80.7 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	561-612							
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	183-246	582-620	825-866					
PUL47_VZVD	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	219-253	371-412	817-866					
PUL50_HCMVA	ALPHA TRANS-INDUCING FACTOR 91.8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	84-135	156-209	664-701					
PUL51_HSV11	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	155-189							
PUL51_HSVE4	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	118-169							
PUL51_HSVEB	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	121-162							
PUL51_VZVD	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	120-161							
PUL52_EBV	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL52_HSV11	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	188-255							
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-223							
PUL52_HSVSA	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	141-182	929-970						
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	445-483							
PUL53_HCMVA	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-342							
PUL55_HSV2H	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-48							
PUL64_HCMVA	PROTEIN UL55	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	151-185							
PUL70_HCMVA	HYPOTHETICAL PROTEIN UL64	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-73							
PUL74_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-99							
PUL87_HSV6U	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-79							
PUL87_HSVSA	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	729-770							
PUL88_HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366-400	582-616						
PUL91_HSVSA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	357-391							
PUL92_EBV	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	24-58							
PUL92_HCMVA	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	188-222						
PUL92_HSV6U	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-116							
PUL92_HSVSA	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	101-145	174-216						
PUL93_HCMVA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	88-122							
PUL95_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	23-57	299-384						
PUL95_HSV6U	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	259-293						
PUL96_HCMVA	HYPOTHETICAL PROTEIN 1JR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	71-151	233-270						
PUL96_HSV6U	HYPOTHETICAL PROTEIN UL96	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	51-103							
PUL96_HSVSA	HYPOTHETICAL PROTEIN 14R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	53-113							
PULA2_HCMVA	HYPOTHETICAL GENE 35 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	45-100							
PULA4_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40	758-792						
PULT06_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1-56	130-171	330-364	439-492	541-575			

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUNG_HSV11	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	84-125							
PUNG_HSV23	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	227-268							
PUNG_HSV2H	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	188-229							
PUNG_HSV5A	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52	148-189							
PUNG_SFVKA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176							
PUS02_HSVEB	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115							
PUS02_HSVEK	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	79-120							
PUS07_HCMVA	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	86-120							
PUS11_HCMVA	HYPOTHETICAL PROTEIN HXLF5		2-36							
PUS14_HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								
PUS18_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	3-51							
PUS23_HCMVA	MEMBRANE PROTEIN HWLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	187-225							
PUS24_HCMVA	HYPOTHETICAL PROTEIN HXLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-335	535-578						
PUS26_HCMVA	HYPOTHETICAL PROTEIN HXLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-172							
PUS27_HCMVA	HYPOTHETICAL PROTEIN HXLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-584							
PUS30_HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40							
PV125_AMVLE	HYPOTHETICAL PROTEIN HXURF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-169	274-312						
PV140_NPVAC	125 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	18-52	326-367	591-649					
PV16K_TRVPS	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	313-350	1114-1150	1179-1213					
PV16K_TRVSY	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	75-117							
PV1A_BBMV	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	75-117							
PV1A_BMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	21-55	349-405	492-526	710-751	837-884	890-924		
PV1A_CCMV	1A PROTEIN	BROME MOSAIC VIRUS	4-66	348-411						
PV1A_CMVFN	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	4-53	242-276	348-389	487-526				
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-66	393-434	584-619	868-916				
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-66	393-434	584-619	868-916				
PV1A_PSVJ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434						
PV1A_TAV	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	4-66							
PV23K_HSVTH	1A PROTEIN	TOMATO ASPERMY VIRUS	11-59	392-433	857-923					
PV24K_BDV	23.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN H2)	177-211							
PV25K_NPVAC	24 KD ANTIGEN	BORNA DISEASE VIRUS	63-121	130-171						
PV28K_PLRVI	25 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-50							
PV28K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	116-150							
PV290_ASFL5	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	116-150							
PV29K_PEBV	LIS 290 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	138-183							
PV29K_TRVSY	29.6 KD PROTEIN	EARLY BROWNING VIRUS	115-192							
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM), AND (STRAIN PSG)	167-201							
PV2A_CCMV	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	45-79							
PV2A_CMVFN	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	768-806							
PV2A_PSVJ	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	386-420							
PV2A_TAV	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	717-751							
PV30K_TRVTC	2A PROTEIN	TOMATO ASPERMY VIRUS	722-756							
PV360_ASFB7	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	105-218							
PV362_ASFB7	K360 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	53-87	151-192						
PV363_ASFB7	K362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	54-102	161-212	290-324					
PV3A_BMV	D363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	153-199							
PV3A_CMVFN	3A PROTEIN	BROME MOSAIC VIRUS	11-45							
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	215-255							
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	215-255							
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	215-255							
PV51K_ACLSV	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	215-255							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV51K_BWYVF	50.8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	72-106							
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	196-233	404-451					
PV56K_PLRVI	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GB1)	113-147	196-233	407-451					
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	47-81	438-472						
PV58K_BSMV	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	47-81	438-475						
PV66K_BWYVF	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-162	323-371						
PV70K_PLRVI	66.2 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	480-521							
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	98-144	514-548						
PV90K_AMVLE	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	98-144	409-443	514-548					
PVA04_VACCC	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-141							
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	32-66	231-275						
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	32-66	231-275						
PVA06_VACCC	PROTEIN A4	VARIOLA VIRUS	22-66	210-265						
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-213	314-355						
PVA06_VARV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	96-212	313-354						
PVA08_VACCC	PROTEIN A6	VARIOLA VIRUS	97-213	313-358						
PVA08_VARV	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-236							
PVA09_VACCC	PROTEIN A8	VARIOLA VIRUS	176-236							
PVA09_VARV	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-81							
PVA11_VACCC	PROTEIN A9	VARIOLA VIRUS	46-95							
PVA11_VARV	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-134	141-175	219-283					
PVA12_VACCC	PROTEIN A11	VARIOLA VIRUS	98-176	220-284						
PVA12_VARV	PROTEIN A12	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-148							
PVA18_VACCC	PROTEIN A12	VARIOLA VIRUS	111-152							
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN	433-467							
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	307-341	433-467						
PVA20_VACCC	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	307-341	433-467						
PVA20_VARV	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67							
PVA22_VACCC	PROTEIN A20	VARIOLA VIRUS	1-67							
PVA22_VARV	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-69							
PVA23_VACCC	PROTEIN A22	VARIOLA VIRUS	39-80							
PVA23_VARV	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-143	173-207	255-289	344-382				
PVA31_VARV	PROTEIN A23	VARIOLA VIRUS	95-143	173-207	255-289	344-382				
PVA32_VACCV	PROTEIN A31	VARIOLA VIRUS	88-126							
PVA32_VARV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN								
PVA33_VARV	PROTEIN A32	VARIOLA VIRUS	217-251							
PVA36_VACCV	PROTEIN A33	VARIOLA VIRUS	63-97							
PVA36_VARV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	26-67	109-155						
PVA37_VACCC	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	26-67							
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	24-65							
PVA38_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	24-65							
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-91							
PVA38_VARV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-91							
PVA39_VACCC	PROTEIN A38	VARIOLA VIRUS	44-91							
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71							
PVA46_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109							
PVA46_VACCV	PROTEIN A46	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-126							
PVA46_VARV	PROTEIN A46	VACCINIA VIRUS (STRAIN WR)	81-126							
PVA47_VACCC	PROTEIN A46	VARIOLA VIRUS	81-126							
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-96	143-184						
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	62-96	143-184						

LMOTIS
lif Search Results

GENE	ALLMOTIS	All Viruses (no bacteriophage)								
E NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
A49_VACCC	PROTEIN A47	VARIOLA VIRUS	62-96	143-184						
A49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-40	126-160						
A49_VARV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	3-40	126-160					1	
A52_VACCC	PROTEIN A49	VARIOLA VIRUS	3-40	126-160						
A52_VACCV	PROTEIN A52	VACCINIA VIRUS (STRAIN COPENHAGEN)	91-132							
A57_VACCC	PROTEIN A52	VACCINIA VIRUS (STRAIN WR)	91-132							
A57_VACCV	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-168							
ALI_MSVK	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	134-168							
ALI_MSVN	ALI PROTEIN	MAIZE STREAK VIRUS (KENYAN ISOLATE)	230-269							
ALI_MSVS	ALI PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	228-262							
ALI_SLCV	ALI PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	228-262							
ALI_TYDVA	ALI PROTEIN	SQUASH LEAF CURL VIRUS	117-151							
ALI_ABMVW	ALI PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	191-225							
AL3_BGMV	AL3 PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	44-78	83-124						
AL3_PYMVV	AL3 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	44-78	83-124						
AL3_SLCV	AL3 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	30-78	87-121						
AL3_TGMV	AL3 PROTEIN	SQUASH LEAF CURL VIRUS	46-80	91-125						
AT_CAMVC	AL3 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	44-78							
AT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	84-127						
AT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70							
AT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-127						
AT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-127						
AT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-127						
AT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	22-70	93-130						
AT_CERV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70							
B03_VACCV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	99-138							
B04_VACCC	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-142							
B04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-123	321-372	496-530					
B04_VARV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	89-123	321-372						
B05_VACCO	PROTEIN B4	VARIOLA VIRUS	89-134	324-372	492-530					
B05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	254-298							
B05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-298							
B05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	254-298							
B07_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	254-298							
B08_VACCC	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	28-62							
B08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-60							
B18_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-60							
B18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375	491-532						
B18_VARV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375	491-532						
B19_VACCC	PROTEIN B18	VARIOLA VIRUS	337-378	491-532						
B19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-121							
B19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	85-119							
B20_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	85-119							
B21_VACCV	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-85							
BL1_BGMV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	61-95							
BL1_SLCV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	159-193							
BL1_TGMV	BL1 PROTEIN	SQUASH LEAF CURL VIRUS	159-193							
BR1_BGMV	BL1 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	159-193							
BR1_SLCV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	172-206							
BR1_TGMV	BR1 PROTEIN	SQUASH LEAF CURL VIRUS	20-61							
C02_VACCC	BR1 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	25-59							
C02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-82	262-302	391-442					

GENE	ALLMOTIS	All Viruses (no bacteriophages)								
E NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
C04_SFVKA	PROTEIN C2	VACCINIA VIRUS (STRAIN WR)	37-82	262-302	391-442					
C04_VACCC	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	175-223	374-408						
C04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46							
C04_VARV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46							
C05_SFVKA	PROTEIN C4	VARIOLA VIRUS	12-46							
C05_VACCC	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	82-125							
C05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-68							
C05_VARV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	31-68							
C08_SFVKA	PROTEIN C5	VARIOLA VIRUS	32-70	73-121						
C09_SFVKA	HYPOTHETICAL PROTEIN C8	SHOPE FIBROMA VIRUS (STRAIN KASZA)	45-86							
C09_VACCC	HYPOTHETICAL PROTEIN C9	SHOPE FIBROMA VIRUS (STRAIN KASZA)	63-106							
C09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-116	168-226	289-325	575-612				
C10_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	82-116	168-226	289-323	575-612				
C10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180							
C10_VARV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-176							
C12_SFVKA	PROTEIN C10	VARIOLA VIRUS	136-170							
C13_SFVKA	HYPOTHETICAL PROTEIN C12	SHOPE FIBROMA VIRUS (STRAIN KASZA)	2-36							
C16_VACCC	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-66	137-182	189-240					
C17_VACCC	PROTEIN C16/B22	VACCINIA VIRUS (STRAIN COPENHAGEN)	142-176							
C18_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	100-155	325-359						
C19_SFVKA	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-98							
C19_VACCC	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	56-97							
CAP_EBV	PROTEIN C19/B25	VACCINIA VIRUS (STRAIN COPENHAGEN)	218-252							
CAP_HCMVA	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-184	670-709						
CAP_HSV11	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	136-174	191-225	260-294					
CAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-175	308-356						
CAP_HSVEB	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS	136-174	230-266	311-382					
CAP_HSVSA	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	150-184	304-352						
CAP_PRVIS	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	479-520	673-714	755-799					
CAP_VZVD	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	105-160	292-326						
CGJ_NPVAC	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	128-198	316-350						
D05_FOWPI	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	110-248							
D05_VACCC	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	145-181							
D05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-157							
D05_VARV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	123-157							
D09_VACCC	PROTEIN D5	VARIOLA VIRUS	123-157							
D09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	126-160							
D09_VARV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	126-160							
D10_FOWPI	PROTEIN D9	VARIOLA VIRUS	126-160							
D10_SFVKA	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	65-99	188-222						
D10_VARV	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	4-52							
DBP_CAMVC	PROTEIN D10	VARIOLA VIRUS	67-105							
DBP_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	1-35							
DBP_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	1-35							
DBP_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	1-35							
DBP_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	1-35							
E02_VACCC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	1-35							
E02_VACCV	PROTEIN E2	VACCINIA VIRUS (STRAIN COPENHAGEN)	282-336							
E02_VARV	PROTEIN E2	VACCINIA VIRUS (STRAIN WR)	282-336							
E03_VACCC	PROTEIN E2	VARIOLA VIRUS	282-336							
E03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-61							
E03_VARV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	17-61							

:GENE	ALLMOTIS	All Viruses (no bacteriophages)								
LE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
'E05_VACCC	PROTEIN E5	VARIOLA VIRUS	17-61							
'E05_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-93							
'E05_VACCV	PROTEIN E5	VACCINIA VIRUS (STRAIN DAIREN I)	38-103							
'E05_VARV	PROTEIN E5	VACCINIA VIRUS (STRAIN WR)	38-103							
'E06_VACCC	PROTEIN E6	VARIOLA VIRUS	105-139	232-266						
'E06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-139	232-266						
'E06_VARV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	105-139	367-401						
'E18_NPVAC	EARLY 18.5 KD PROTEIN	VARIOLA VIRUS	112-163							
'E1_HPV1A	E1 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	137-171							
'E1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	56-90							
'E1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	33-67	133-167						
'E1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	56-90							
'E1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	59-96							
'E1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	55-89	312-346						
'E1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	25-87							
'E1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	33-67	119-174						
'E1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	265-299							
'E1_PAPVE	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	176-210							
'E36_NPVAC	E1 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	72-117							
'E2_CRPVK	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	3-44							
'E2_HPV05	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	5-57	276-310	342-383	437-471				
'E2_HPV08	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	5-55	148-182						
'E2_HPV16	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	61-105	315-349						
'E2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	65-100							
'E2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	3-37	159-193						
'E2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	13-47	159-193						
'E2_HPV31	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	61-105							
'E2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	63-101	297-331						
'E2_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	62-106	158-192						
'E2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	74-110	323-357						
'E2_HPV41	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	6-54							
'E2_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	5-55	148-182						
'E2_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	154-191							
'E2_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	13-47	179-213						
'E2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	2-36							
'E2_HPV5B	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	5-57							
'E2_PAPVD	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	107-141							
'E2_PAPVE	PROBABLE E2 PROTEIN	DEER PAPILLOMAVIRUS	113-150							
'E2_PCPV1	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	318-361							
'E2_RHPV1	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	62-106	307-341						
'E39_NPVAC	EARLY 39 KD PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	20-57							
'E39_NPVOP	EARLY 39 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	119-156							
'E4_HPV18	PROBABLE E4 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	42-86							
'E4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	63-97							
'E5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	3-40	96-130						
'EF_GVTN	VIRAL ENHANCING FACTOR (VEF) (104 KD GLYCOP	HUMAN PAPILLOMAVIRUS TYPE 5B	681-719							
'ENV_BEV	ENVELOPE PROTEIN	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	195-229							
'ENV_DHV1	ENVELOPE GLYCOPROTEIN PRECURSOR	BERNE VIRUS (BEV)	318-366							
'ENV_MCV1	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	252-286							
'ENV_MCV2	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCVI)	252-286							
'ENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR (SURFACE	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCVII)	313-354							
		THOGOTO VIRUS (THO)								

GENE	ALLNOTES	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
GENE	PROTEIN	VIRUS								
ENV_VACCI	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-295							
ENV_VACCI	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN IHD-J)	237-295							
ENV_VACCP	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN L-IVP)	237-295							
ENV_VACCV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN WR)	237-295							
ENV_VARV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VARIOLA VIRUS	237-295							
ETS_NPVAC	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	1-53							
01_VACCC	ECORI-T SITE PROTEIN ETS	VACCINIA VIRUS (STRAIN COPENHAGEN), AND VACCINIA VIRUS	46-80	124-158						
01_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	46-80	124-158						
01_VACCC	PROTEIN F1 (FRAGMENT)	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110							
01_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	71-110							
03_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-139	282-320						
03_VACCP	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-139	282-320						
03_VACCV	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	81-139	283-321						
03_VARV	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	81-122	281-322						
06_VARV	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	8-44							
11_VACCC	PROTEIN F6	VARIOLA VIRUS	217-258	269-313						
11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	213-254	265-311						
11_VARV	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	41-75	269-315						
F12_VACCC	PROTEIN F11	VARIOLA VIRUS	1-67	102-143	199-236	330-388	544-581			
F12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67	102-143	199-236	330-388	544-581			
F12_VARV	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	1-67	102-143	199-236	330-388	547-581			
F16_VACCC	PROTEIN F12	VARIOLA VIRUS	1-67	199-236	330-388	547-581				
F16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-194							
F16_VARV	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	155-194							
FP3_FOWPV	PROTEIN F16	VARIOLA VIRUS	1-43							
FP4_FOWPV	PROTEIN FP3	FOWLPOX VIRUS	139-173	239-273						
FP7_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	23-57							
FPL_FOWPI	PROTEIN FP7	FOWLPOX VIRUS (STRAIN FP-1)	77-111							
FUS_VACCC	FPLEFT PROTEIN (FRAGMENT)	VACCINIA VIRUS (STRAIN COPENHAGEN)	30-64							
FUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	30-64							
VG01_HSV11	14 KD FUSION PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	271-306	312-363	591-647	730-764				
VG01_VACCC	HYPOTHETICAL GENE 1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	301-339							
VG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	240-278							
VG01_VARV	PROTEIN G1 (FRAGMENT)	VARIOLA VIRUS	301-339							
VG03_HSVEB	PROTEIN G1	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	143-177							
VG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A) (EHV-1)	143-177							
VG03_VARV	PROTEIN G3 (ORF L1)	VARIOLA VIRUS	64-98							
VG05_VACCC	PROTEIN G3	VACCINIA VIRUS (STRAIN COPENHAGEN)	117-158	235-289	355-389					
VG05_VARV	PROTEIN G5	VARIOLA VIRUS	117-158	235-289	355-389					
VG06_HSV11	PROTEIN G5	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	61-109							
VG07_HSV11	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	69-103							
VG07_VACCC	HYPOTHETICAL GENE 7 MEMBRANE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-175	224-258						
VG07_VARV	PROTEIN G7	VARIOLA VIRUS	114-175	224-258						
VG09_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	304-338							
VG09_VACCV	PROTEIN F1 (PROTEIN G9)	VACCINIA VIRUS (STRAIN WR)	304-338							
VG09_VARV	PROTEIN F1 (PROTEIN G9) (FRAGMENT)	VARIOLA VIRUS	304-338							
VG10_HSV11	PROTEIN F1 (PROTEIN G9)	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	63-97							
VG12_SPV1R	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	11-45							
VG16_HSVSA	GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	58-95							
VG17_HSV11	HYPOTHETICAL GENE 16 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	92-129	177-211						
VG18_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	174-208	215-256						
VG1L_AAEPV	HYPOTHETICAL GENE 18 PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	407-441							
VG1_SPV1R	G1L PROTEIN									

PCGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PCGENE	ALLNOTES	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-RHA1 B	136-170	320-337						
PVG2_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	207-221							
PVG34_HSV11	HYPOTHETICAL GENE 33 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	117-158	437-439	660-692	899-1055				
PVG37_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	2-72	24-108						
PVG38_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	164-219							
PVG39_HSV11	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	233-290							
PVG1_SPV1R	HYPOTHETICAL G1R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	184-218							
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-RHA2 B	285-326							
PVG33_HSV11	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	222-256							
PVG34_HSV11	HYPOTHETICAL GENE 33 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	235-310							
PVG35_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	149-183							
PVG37_HSV11	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	345-379							
PVG38_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	13-90							
PVG39_HSV11	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV	435-472							
PVG1_SPV1R	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	84-118							
PVG3_SPV1R	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	124-158	266-300						
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-RHA2 B	8-49	162-196	200-244					
PVG40_HSV11	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	6-54	117-151						
PVG45_HSV5A	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	116-150	262-296	324-361	641-677				
PVG46_HSV11	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	121-162							
PVG48_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	45-86	939-1078	1251-1321					
PVG48_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	168-207							
PVG49_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-417	611-666	723-767					
PVG4R_AMEPV	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	68-102							
PVG4_SPV4	GENE 4 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	4-38							
PVG51_HSV11	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	89-110							
PVG51_HSV5A	HYPOTHETICAL GENE 51 GLYCOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	14-73	89-123						
PVG53_HSV11	GENE 51 GLYCOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-70	123-157	162-196					
PVG54_HSV11	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	67-127							
PVG55_HSV11	HYPOTHETICAL GENE 54 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	333-396							
PVG55_HSV5A	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	101-135							
PVG56_HSV11	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	116-178							
PVG59_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	131-192	378-412	644-678	750-784	846-880	1111-1145		
PVG59_HSV5A	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	10-72	89-123						
PVG5_SPV1R	GENE 59 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	169-209							
PVG61_HSV11	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-RHA2 B	63-103							
PVG63_HSV11	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	283-299							
PVG65_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	346-384							
PVG66_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	803-839	1233-1234						
PVG67_HSV11	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	154-188	328-410						
PVG68_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	379-413	501-546	1321-1369	1478-1541				
PVG72_HSV11	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	245-288							
PVG73_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	447-486	723-757	912-949					
PVG8_SPV1R	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	271-305	188-422						
PVGF1_IIDVB	GENE 8 PROTEIN	SPIROPLASMA VIRUS SPV1-RHA2 B	5-51							
PVGI0_ICMVA	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (I	142-179	1233-1267	2119-2156	3388-3424	3478-3513	3517-3556	3761-3795	
PVGL1_CVPR8	GLYCOPROTEIN H101 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								
PVGL1_CVBF	E1 GLYCOPROTEIN PRECURSOR (MATRIX GLYCOP	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/113760A / BRI	213-257							
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN F15	850-885	993-1088	1261-1305					
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN L9)	850-885	992-1109	1260-1305					
PVGL2_CVBN1	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN LY-138)	642-676	850-885	993-1109	1260-1305				
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN MEBUS	642-676	850-885	993-1109	1260-1305				
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN QUEBEC)	642-676	850-885	993-1109	1260-1305				

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVGL2_CVBI2	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN VACCINE)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVH4	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	HUMAN CORONAVIRUS (STRAIN 229E)	770-916	1055-1112						
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS A0IV (STRAIN WILD TYPE 4) (A0IV-4)	643-684	1001-1117	1270-1315					
PVGL2_CVMAC	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS A0IV (STRAIN A59)	591-632	949-1079	1218-1263					
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS A0IV (STRAIN JHMV / VARIANT CL-2)	643-684	1001-1117	1270-1315					
PVGL2_CVPFS	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS A0IV (STRAIN JHM)	503-543	860-976	1129-1174					
PVGL2_CVPMI	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-923	1040-1186	1352-1389		
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-923	1040-1186	1352-1389		
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	70-110	446-480	690-731	887-921	1038-1184	1350-1387		
PVGL2_CVPRI	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1038-1184	1350-1387		
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRU	224-258	468-509	665-699	816-962	1128-1165			
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RAIN) (PRCV)	224-258	468-509	665-699	816-962	1128-1165			
PVGL2_ENV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1038-1184	1350-1387		
PVGL2_FIPV	PROBABLE MEMBRANE GLYCOPROTEIN		68-102							
PVGL2_IBV6	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-245	451-485	695-736	892-926	1043-1189	1355-1392		
PVGL2_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	791-905	1057-1091						
PVGL2_IBVD2	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	437-478	772-904	1056-1090					
PVGL2_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	773-905	1057-1091						
PVGL2_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	437-478	772-904	1056-1090					
PVGLB_HCMVA	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	437-478	772-904	1056-1090					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-88	128-162	436-484	844-878				
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	22-88	128-162	437-478	451-485	845-879			
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	828-890							
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	827-889							
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	827-889							
PVGLB_HSV2J	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	828-890							
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	828-890							
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	828-890							
PVGLB_HSV6U	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAB)	817-871							
PVGLB_HSVB1	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	37-71	185-223						
PVGLB_HSVB2	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	859-913							
PVGLB_HSVBC	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	440-474	848-902						
PVGLB_HSVE1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	863-900							
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	542-576	911-961						
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	474-515	847-900						
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	542-576	911-961						
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	542-576	911-961						
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	542-576	910-960						
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	390-435	649-683	787-845					
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	240-288	406-447						
PVGLB_PRVIF	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	206-260	427-475	693-734	744-778	860-894			
PVGLB_VZVD	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	847-881							
PVGLC_HSV11	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	92-133	596-630	809-867					
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510							
PVGLC_HSV1	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510							
PVGLC_HSV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	442-476							
PVGLC_HSVBC	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	443-477							
PVGLC_HSVEB	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	235-269							
PVGLC_HSVMD	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	182-218							
PVGLC_HSVSD	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	63-97							
PVGLC_HSVSG	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	63-97							
PVGLC_HSVSM	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	62-96							

PCGENE	ALLSHOTS	All Viruses (no bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVGLC_PRVIF	SECRETORY GLYCOPROTEIN GP53-61 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN SB-1)	63-97						
PVGLC_VZVD	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	183-233						
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	280-321						
PVGLD_HSVEA	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	280-321						
PVGLD_HSVEB	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	89-133						
PVGLD_HSVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP) AND (STRAIN KEN	139-173						
PVGLE_HSV11	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	139-173						
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	111-145						
PVGLF_BRSVA	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-159						
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	146-202	504-545					
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	146-202	267-302	506-547				
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	146-202	267-302	506-551				
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	228-297	340-381	568-602				
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	116-203	267-302	506-549				
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	116-202	267-302	506-549				
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	116-202	267-302	506-547				
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	116-202	267-302	506-549				
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON) AND (STRAIN HALLE)	116-184	228-269	432-500				
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	116-187	231-272	435-505				
PVGLF_MNMPI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	116-184	228-269	431-500				
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	103-139	235-272	437-502			
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	103-139	235-272	437-502			
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	103-139	235-272	437-502			
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	20-54	103-139	235-272	437-502			
PVGLF_NDVH	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	117-182	231-272	426-512				
PVGLF_NDVHI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	122-182	231-272	426-517				
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HERTS)	117-182	231-272	426-517				
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN DI-HITCHNER/47)	122-182	231-272	426-517				
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	133-182	238-272	426-517				
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LASOTA)	133-182	231-272	426-517				
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/53)	117-182	231-272	426-512				
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	122-182	231-272	431-512				
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	117-182	231-272	426-517				
PVGLF_PIIOV	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS GB/48)	122-182	231-272	426-517				
PVGLF_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	122-182	231-272	426-512				
PVGLF_PIIH	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	29-63	197-266	309-350	533-581			
PVGLF_PIIHG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	123-174	207-267	459-505				
PVGLF_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	93-183	477-528					
PVGLF_PIIB	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	93-183	477-528					
PVGLF_PIIH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	93-183	477-528					
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	117-182	207-241	456-518				
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	117-182	207-241	462-532				
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KADETE O)	112-180	224-265	448-493				
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	112-180	224-265	448-506				
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	133-188	211-271	462-533				
PVGLF_SENDII	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	127-188	211-271	462-533				
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	133-188	211-271	462-533				
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	127-188	211-271	462-533				
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	127-188	211-271	462-533				
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	96-156	434-508					
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	103-171	241-275	451-487				
PVGLG_RSVV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (	105-161	196-224	437-498				

PFGENE	ALLMOTIFS	All Viruses (no bacteriophages)							
FILESAVE	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PVGLG_BRSVC	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	306-412						
PVGLG_BRSV1	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	30-70	104-138					
PVGLG_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	30-81						
PVGLG_HRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD642)	30-85						
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD1714	30-85						
PVGLG_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD1031)	30-107						
PVGLG_HRSV6	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD61190)	30-85						
PVGLG_HRSV7	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD62356)	30-85						
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD66614)	30-85						
PVGLG_HRSVA	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	30-81						
PVGLG_HRSVL	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	30-87						
PVGLG_HRSVS	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRA	31-85						
PVGLG_SIGNA	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	271-305						
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SIGNA VIRUS	344-381	464-498					
PVGLG_VISVO	SPIKE GLYCOPROTEIN PRECURSOR	SONCTIUS YELLOW NET VIRUS	488-523						
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	383-397						
PVGLH_EBV	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	476-510						
PVGLH_HCMVA	GLYCOPROTEIN GPB5 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	33-87	160-201	336-380	611-694			
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-137	278-311	693-741				
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	102-136	692-740					
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	447-481						
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	447-481						
PVGLH_HSVBC	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	357-406						
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	384-416						
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	324-359	414-455					
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HV	337-372	407-448					
PVGLH_MCMVS	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	32-66	174-433	664-712				
PVGLH_PRVKA	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH	440-474						
PVGLH_PRVNJ	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN KAPLAN)	226-260						
PVGLH_PRVRU	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN NIA-3)	226-260						
PVGLH_VZVD	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN RICE)	226-260						
PVGLI_HCMVA	PROBABLE GLYCOPROTEIN H PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	435-506						
PVGLM_BUNGE	IMMEDIATE EARLY GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-111	121-159					
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	512-567	683-737	1228-1282				
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	916-950						
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	643-677						
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	643-677						
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	340-374	904-963	903-939				
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	937-989	1239-1300					
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	691-727						
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	72-106						
PVGLM_INSV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	72-106						
PVGLM_PHV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	1067-1101						
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	72-111						
PVGLM_SEOUI	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	149-211						
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	691-727						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R27)	694-728						
PVGLN_BEFV	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	691-710						
PVGLP_BEV	NONSTRUCTURAL GLYCOPROTEIN GNS PRECURSO	BOVINE EPHEMERAL FEVER VIRUS	337-414	513-569					
PVGLX_PRVRU	PEPLOMER GLYCOPROTEIN PRECURSOR	BEANE VIRUS	43-82	90-124	622-656	1128-1236			
PVGLY_EDNIN	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN RUCE)	420-461						
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	301-349						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	317-360	388-422						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	318-361	389-423						
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARAISTRON	333-367	393-432					1	
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	324-358	333-367	395-432					
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	316-359							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	334-375							
PVGLY_TACVS	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	315-363							
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	303-351	382-416						
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	302-350	381-415						
PVGNB_CPMV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	303-351	382-416						
PVGNM1_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	835-869							
PVGNM1_CPSMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS	160-201							
PVGNM1_RCMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-226	758-792	874-915					
PVGP8_CDV	GENOME POLYPROTEIN M	RED CLOVER MOTTLE VIRUS	837-871	912-946						
PVGP_EBOV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	94-149							
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	280-321	334-368	469-503					
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	562-596							
PVH02_VACCC	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	562-596							
PVH02_VACCV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-92							
PVH02_VARV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN WR)	58-94							
PVH05_VACCC	LATE PROTEIN H2	VARIOLA VIRUS	58-92							
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-185							
PVH05_VARV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	118-185							
PVHEL_LSV	PROTEIN H5	VARIOLA VIRUS	136-203							
PVHRP_VACCC	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	126-160							
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	216-279							
PVI03_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	216-279							
PVI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	150-193	210-244						
PVI03_VARV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	150-193	210-244						
PVI06_VACCV	PROTEIN I3	VARIOLA VIRUS	150-193	210-244						
PVI06_VARV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	58-92							
PVI07_VARV	PROTEIN I6	VARIOLA VIRUS	58-92							
PVI08_VACCC	PROTEIN I7	VARIOLA VIRUS	373-407							
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	548-589							
PVI08_VARV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	548-589							
PVIE1_HCMVA	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	548-589							
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	78-112	171-205	368-402	416-450				
PVIE1_HCMVS	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	78-112	171-205	368-402	416-450				
PVIE2_NPVOP	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	244-297							
PVIEN_NPVAC	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	94-128	305-395						
PVIF_CAEVC	IMMEDIATE-EARLY REGULATORY PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	277-407							
PVIF_FIVPE	VIRION INFECTIVITY FACTOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	23-92							
PVIF_FIVSD	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	53-94							
PVIF_HIVIA2	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	22-80							
PVIF_HIVIB1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-42	62-96						
PVIF_HIVIB5	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (DH10.BRU.HXB2.PV	1-42	62-96						
PVIF_HIVIEL	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	1-42	62-96						
PVIF_HIVIIR	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1-42	62-96						
PVIF_HIVIMA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	1-42	62-96						
PVIF_HIVIMN	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-36							
PVIF_HIVIN5	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NY5 ISOLATE)	1-42	62-96						
PVIF_HIVINA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	1-42	62-96						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
ENTRY NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVIF_HIVIND	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIT-A)	1-42	62-96						
PVIF_HIVIOY	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	1-42	62-96						
PVIF_HIVIRJ	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	1-42	62-96					1	
PVIF_HIVIU4	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PFAIAT ISOLATE)	1-42	62-96						
PVIF_HIVIZ2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	1-42							
PVIF_HIVIZ6	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE-CDC-Z34 ISOLA	1-42	62-96						
PVIF_HIVZD2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	1-42	62-96						
PVIF_HIV2NZ	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205_7)	147-195							
PVIF_HIV2RO	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	152-193							
PVIF_ONIVVS	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	163-197							
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	OVINE LENTIVIRUS (STRAIN SA-ONVV)	44-114							
PVIF_SIVAG	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	2-58	150-202						
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	17-58							
PVIF_SIVAT	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	2-36	143-187						
PVIF_SIVCZ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	20-58	150-195						
PVIF_SIVGB	VIRION INFECTIVITY FACTOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS	1-42							
PVIMP_HSV11	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	1-39							
PVIMP_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	85-134							
PVIMP_HSVSA	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	148-182	335-369						
PVIMP_VZVD	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-129							
PVINT_SSVI	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-151	155-189	267-301					
PVJ01_VACCC	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	85-130	138-172						
PVJ01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56							
PVJ01_VARV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56							
PVK03_VACCC	PROTEIN J1	VARIOLA VIRUS	22-56							
PVK03_VACCV	PROTEIN K3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-82							
PVK07_VACCV	PROTEIN K3	VACCINIA VIRUS (STRAIN WR)	38-82							
PVL02_VACCC	PROTEIN K7	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	115-149							
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-81							
PVL02_VARV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	47-92							
PVL1_CRPVK	PROTEIN L2	VARIOLA VIRUS	47-81							
PVL1_FPVL	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	261-295	331-383						
PVL1_HPV05	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-90							
PVL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	355-393							
PVL1_HPV1A	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392							
PVL1_HPV47	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	345-379							
PVL1_PAPVD	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	353-391							
PVL1_REOVD	PROBABLE L1 PROTEIN	DEER PAPILLOMAVIRUS	23-57							
PVL2_HPV05	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	94-142	437-471						
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE	341-375							
PVL2_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392							
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	295-333							
PVL2_HPV31	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	345-379							
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	288-326							
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	292-333							
PVL2_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	341-375							
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	293-327							
PVL3_REOVD	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	341-375							
PVL3_REOVJ	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	107-148	1112-1178						
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN D5/ONES)	1112-1178							
PVL96_LRVI	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	107-148	331-365	1112-1178					
PVM101_VACCC	L96 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	198-236						

PCGENE	ALLAIOTIS	All Viruses (no bacteriophages)							
ENTRYNAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVAII_REOVL	PROTEIN AII	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-36							
PVMI21_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	287-321							
PVMI22_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-450	619-663						
PVMI2_REOVJ	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-450	618-662						
PVMI2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN D5/IONES)	416-450	618-662						
PVMI1_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	416-450	618-662						
PVMIA2_BRSVA	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	135-190	337-371	523-558	618-690				
PVMIA2_HRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	42-90							
PVMIA2_TRTV	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	42-90							
PVMIAT_CDVO	MATRIX GLYCOPROTEIN M2	TURKEY RHINOTRACHEITIS VIRUS	36-70							
PVMIAT_INCJ	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	193-234							
PVMIAT_NDVA	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	93-144	151-208						
PVMIAT_NDVD	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32	310-358							
PVMIAT_PIJB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	324-358							
PVMIAT_PIJH4	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	99-133	204-252						
PVMIAT_RABVA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	99-133	204-252						
PVMIAT_RABVC	MATRIX PROTEIN	RABIES VIRUS (STRAIN AVO1)	69-103							
PVMIAT_RABVE	MATRIX PROTEIN	RABIES VIRUS (STRAIN CVS-11)	69-103							
PVMIAT_RABVN	MATRIX PROTEIN	RABIES VIRUS (STRAIN ERA)	69-103							
PVMIAT_RABVP	MATRIX PROTEIN	RABIES VIRUS (STRAIN NISHIGAHARA RC/HI)	69-103							
PVMIAT_RABVS	MATRIX PROTEIN	RABIES VIRUS (STRAIN PV)	69-103							
PVMIAT_SYNV	MATRIX PROTEIN	RABIES VIRUS (STRAIN SAD B19)	69-103							
PVMIAT_VSVIG	MATRIX PROTEIN	SONCHUS YELLOW NET VIRUS	246-280							
PVMIE1_CVBM	MATRIX PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	198-232							
PVMIE1_CVFFS	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEDUS)	175-209							
PVMIE1_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	98-146	212-257						
PVMIE1_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	212-257							
PVMIE1_CVTKE	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	212-257							
PVMIE1_FIPV	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	28-62	175-209						
PVMIE1_IBV6	E1 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	212-257							
PVMIE1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-55	177-218						
PVMIE1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-55	177-218						
PVMIE1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE A1	21-55	177-218						
PVMIEM_EBV	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	177-218							
PVNIP_CAMVC	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	36-94							
PVNIP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	187-254	270-324						
PVNIP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/II)	187-254	270-324						
PVNIP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BDC)	187-254	270-324						
PVNIP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	187-254	270-324						
PVNIP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	187-254	270-324						
PVNIP_CERV	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	187-254	270-324						
PVNIP_FMVD	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	212-246							
PVNIP_SOCMV	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	217-251							
PVNISA_IDPBDB	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	76-118							
PVNISA_IDPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S	272-313	324-361						
PVNISA_IDPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	271-312	323-360						
PVNISA_IDPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	234-275	289-323						
PVNISA_IDPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S3	272-313	324-361						
PVNISA_IDPBIE	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	210-244							
PVNISA_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328							
PVNISA_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS I	208-242							
PVNISA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	213-247							

PCGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
[illegible]	PROTEIN	VIRUS	213-247						
PVNSA_WHVSI	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	213-247						
PVNSI_DHVSI	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	213-247						
PVNSI_IAANN	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	201-235						
PVNSI_IABAN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	92-126	174-222					
PVNSI_IACAO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	92-126	174-222					
PVNSI_IAUDW	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/CAMELID/MONGOLIA/82)	11-70						
PVNSI_IAFPR	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50) AND (STR	92-126	174-222					
PVNSI_IAFPW	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	92-126	174-222					
PVNSI_IAFPZ	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	92-126	174-222					
PVNSI_IAHK2	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	92-126	174-222					
PVNSI_IASWN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	92-126	174-222					
PVNSI_IAWSC	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SAILLARD/NEW YORK/39/78)	92-126	174-222					
PVNSI_IAPUE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PORT CHALMERS/1/73)	92-126	174-222					
PVNSI_IAPUO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	92-126	174-222					
PVNSI_IAUDO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	92-126	174-222					
PVNSI_IAWIL	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1/1)	92-126	174-222					
PVNSI_IAZJI	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	92-126	174-222					
PVNSI_INDAC	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	92-126						
PVNSI_INBAD	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	175-209						
PVNSI_INBLE	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	175-209						
PVNSI_INBSI	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	175-209						
PVNSI_INBAC	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	175-209						
PVNI2_INBAD	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	132-184						
PVNI2_INBLE	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	132-184						
PVNI2_INBSI	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	132-184						
PVNI2_INBAC	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	132-184						
PVNTE_MYXVL	SITE PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	46-80	145-197					
PVN01_VACCC	PROTEIN N1	VACCINIA VIRUS (STRAIN COPENHAGEN)	64-112						
PVN34_ROTBS	PROTEIN N1	VACCINIA VIRUS (STRAIN WR)	64-112						
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-169						
PVNCA_AAV2	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-117	121-169					
PVNCA_RSV	DNA REPLICATION PROTEIN	ADENO-ASSOCIATED VIRUS 2	91-135	217-251					
PVNCN_PAVBO	MAJOR NONCAPSID PROTEIN	RICE STRIPE VIRUS	129-163						
PVNCS_ADVG	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	121-255						
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	119-60	270-304					
PVNCS_FPV19	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002)	276-339	521-571	585-640	715-760	780-849		
PVNCS_MEVA	NONCAPSID PROTEIN NS-1	FELINE PANLEUKOPENIA VIRUS (STRAIN 1971)	33-98						
PVNCS_MUMIM	NONCAPSID PROTEIN NS-1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	33-98						
PVNCS_MUMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	33-91	261-297					
PVNCS_PAVBO	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	33-87	259-297					
PVNCS_PAVCN	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS	181-222						
PVNCS_PAVIB	NONCAPSID PROTEIN NS-1	CANINE PARVOVIRUS (STRAIN N)	33-98						
PVNCS_PAVIH	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	136-170						
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS 111	35-76	239-297					
PVNSI_BTV10	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-77	169-210	309-346				
PVNSI_BTV17	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	107-141						
PVNSI_BTV1A	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	107-141						
PVNSI_BTV1S	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	107-141						
PVNSI_BTV3O	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	107-141						
PVNSI_EHDV2	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 20 / ISOLATE AUSTRALIA)	107-141						
PVNSI_IAANN	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	401-434						
PVNSI_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	49-83						
PVNSI_IACKO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMELID/MONGOLIA/82	37-71						

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	49-83							
PVNS1_IADAJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	46-80							
PVNS1_IADEI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	49-83							
PVNS1_IADUJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	46-80							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	46-80							
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	49-83							
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND (STRA	49-83							
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	49-83							
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	49-83							
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	49-83							
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76	49-83							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	49-83							
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78	49-83							
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MIYNAH/MANEDA-TIIAI/76)	46-80							
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79	49-83							
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	49-83							
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78	49-83							
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	49-83							
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	49-83							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/14	49-83							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	49-83							
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	49-83							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61	46-80							
PVNS1_IAZII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	49-83							
PVNS1_INBAC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	49-83							
PVNS1_INBGA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	143-177							
PVNS1_INBIK	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/GA/86)	143-177							
PVNS1_INBIT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73), AND (STRAIN	143-177							
PVNS1_INBID	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/HT/84)	143-177							
PVNS1_INBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ID/86)	143-177							
PVNS1_INBMD	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	143-177							
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	143-177							
PVNS1_INBRU	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	143-177	277-337						
PVNS1_INBSI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/RU/69)	139-173							
PVNS1_INBSJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	143-177							
PVNS1_INBVJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	143-177.							
PVNS1_INBVA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/VICTORIA/87)	143-177							
PVNS2_AHSV9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	143-177							
PVNS2_BTV17	NONSTRUCTURAL PROTEIN NS2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	67-101							
PVNS2_BTV1X	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	203-237							
PVNS2_CVMJH	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	203-237							
PVNS2_EHDV2	NONSTRUCTURAL PROTEIN NS2	MURINE CORONAVIRUS MHV (STRAIN JHM)	71-105							
PVNS2_IAALA	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	206-272	276-311						
PVNS2_IAANA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77), AND (STRAIN A/U	14-93							
PVNS2_IAANN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	14-93							
PVNS2_IACHI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60), AND (STRAIN	14-93							
PVNS2_IACKG	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	14-93							
PVNS2_IACKJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	14-79							
PVNS2_IADAJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	11-90							
PVNS2_IADEI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	14-79							
PVNS2_IADUJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	11-90							
PVNS2_IAFOM	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	11-90							

PCGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FEATURE	PROTEIN	VIRUS								
PVNS1_IAIOV	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PORT MONMOUTH/1/47)	14-93							
PVNS1_IAIPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PORT WARREN/1/50)	14-93							
PVNS1_IALE2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	14-93							
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1957)	14-93							
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	14-93							
PVNS1_IAMA8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALLAARD/ALBERTA/35/76)	14-79							
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALLAARD/ALBERTA/37/76)	14-79							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALLAARD/NEW YORK/6515/78)	14-93							
PVNS1_IAN1N	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALLAARD/NEW YORK/6497/78)	14-93							
PVNS1_IAP10	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANYANG/ANEDA-TIIA/76)	11-90							
PVNS1_IAP11	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	14-93							
PVNS1_IAP12	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/135/79)	14-79							
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/168/78)	14-93							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	14-93							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETIBLEHEM-GILIT/14	14-79							
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71	14-79							
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	11-52							
PVNS1_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	14-93							
PVNS1_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40	2-43	59-119						
PVNS1_INCII	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	2-43	59-119						
PVNS1_PVM	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	37-98							
PVNS1_AJSV3	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	70-104							
PVNS1_AHSV9	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 3)	44-78	166-215						
PVNS1_BRD	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	37-78	88-132	166-215					
PVNS1_CVPFS	NONSTRUCTURAL PROTEIN NS3	BROADHAVEN VIRUS	26-90	102-147						
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	13-51							
PVNS4_RSV	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	11-51							
PVNS1_CVCAE	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	2-40							
PVNS1_CVFE1	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-47							
PVNS1_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	1-42							
PVNSC_CDVO	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	1-42							
PVNSC_MEASE	NONSTRUCTURAL PROTEIN C	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	50-84	93-132						
PVNSC_MEASI	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN EDMONSTON)	43-84							
PVNSC_MEASY	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN IP-J CA)	43-84							
PVNSC_PIIIC	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN YAMAGATA-1)	43-84							
PVNSC_PIIID	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	133-167							
PVNSC_PIIIC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	133-167							
PVNSC_PIIID	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CL 973)	133-167							
PVNSC_PIIIE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CL-1403)	40-75	133-167						
PVNSC_PIIIH	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CL-14783)	58-133	161-199						
PVNSC_SENDS	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	133-167							
PVNSC_SENDH	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN 6/64)	133-167							
PVNSC_SENDZ	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN HARRIS)	133-167							
PVNSM_MSV	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN Z)	133-167							
PVNST_BUNGE	NONSTRUCTURAL PROTEIN NS-A1	INPATIENS NECROTIC SPOT VIRUS (INSV)	44-102	262-296						
PVNST_BUNGL	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS GERMISTON	34-75							
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE (ISOLATE L74)	5-39							
PVNST_BUNGV	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	5-39							
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	MAGUARI VIRUS	35-69							
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS (TOS)	144-183							
PVNUA_PRVKA	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS (UUK)	119-173							
PVNUC_DHVII	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	1134-1175							
PVNUC_EBOV	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	209-243							

PCGENE	ALLAIOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVNUC_IAANA	NUCLEOPROTEIN	EBOLA VIRUS	191-225	227-261	329-369					
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRINTORJE/695/76)	1-42	96-154	357-408					
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	357-408						
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	1-42	357-408						
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	96-154	357-408					
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	1-42	357-409						
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	1-42	96-154	357-408					
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	1-42	96-154	357-408					
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80)	1-42	96-154	357-408					
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	1-42	96-154	357-408					
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	1-42	96-154	360-408					
PVNUC_IADE2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	1-42	96-154	357-408					
PVNUC_IADIX	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	1-42	96-154	357-408					
PVNUC_IADM2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	1-42	96-154	357-408					
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74	1-42	96-154	357-408					
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	1-42	96-154	357-408					
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	1-42	96-154	357-408					
PVNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	96-154	357-408						
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	1-42	357-409						
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	1-42	357-409						
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	357-408							
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/	1-42	96-154	357-408					
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	96-154	360-408					
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	1-42	103-154	357-408					
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	1-42	357-408						
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	96-154	357-409						
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	1-42	96-154	357-409					
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	1-42	96-154	357-409					
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	1-42	96-154	357-409					
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	1-42	96-154	357-409					
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	1-42	96-154	357-409					
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HUCKOX/40)	1-42	357-409						
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	1-42	96-154	357-408					
PVNUC_IAHM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	96-154	357-408					
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	1-42	96-154						
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	1-42	357-409						
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	1-42	357-409						
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	96-154	357-408						
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-154	357-408					
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	357-409						
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	1-42	357-409						
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-154	357-408					
PVNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	1-42	96-154	357-408					
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	1-42	96-154	357-408					
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	1-42	96-154	357-408					
PVNUC_IAOIU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	357-409						
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/6/83)	1-42	357-409						
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	1-42	96-154	357-408					
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	357-409						
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	1-42	96-154	357-408					
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	1-42	96-154	357-409					
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	1-42	357-408						

PCGENE	ALLAIOTIS	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	357-409						
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	1-42	96-154	357-408					
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	1-42	96-154	357-408					
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	1-42	96-154	357-408					
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	1-42	96-154	360-408					
PVNUC_IATXT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	1-42	96-154	357-405					
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	1-42	357-409						
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	1-42	357-409						
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	1-42	357-408						
PVNUC_IAWIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	357-408							
PVNUC_IAWIP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	1-42	96-154	357-409					
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/19/76)	1-42	96-154	357-408					
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	1-42	357-409						
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	1-42	96-154	357-408					
PVNUC_IAZ4I	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	1-42	96-154	357-408					
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	1-42	96-154	357-408					
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	1-42	357-409						
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	1-42	357-409						
PVNUC_IAZHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	1-42	96-154	357-408					
PVNUC_IAZHJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	1-42	357-409						
PVNUC_IAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	1-42	96-154	357-408					
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	1-42	96-154	357-408					
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	96-154	357-408					
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	1-42	96-154	357-408					
PVNUC_IAZJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	1-42	96-154	357-408					
PVNUC_IAZJ2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	1-42	96-154	357-408					
PVNUC_IAZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	1-42	96-154	357-408					
PVNUC_IAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	1-42	96-154	357-408					
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	1-42	96-154	357-408					
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	1-42	96-154	357-408					
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	1-42	96-154	357-408					
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	1-42	96-154	357-408					
PVNUC_IAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	1-42	96-154	357-408					
PVNUC_IAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	1-42	96-154	357-408					
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	1-42	96-154	357-408					
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	1-42	96-154	357-408					
PVNUC_INBAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	1-42	96-154	357-408					
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/86)	75-142	480-514						
PVNUC_INBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	75-142	480-514						
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	75-145	480-514						
PVNUC_INBSI	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	75-146	480-514						
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	75-142	480-514						
PVNUC_MABVM	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	92-203	406-447						
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	173-207	322-407						
PVO01_VACCC	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	173-207	322-407						
PVO01_VARV	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	102-145	245-279	341-382	581-615				
PVORI_FXMV	PROTEIN O1	VARIOLA VIRUS	102-145	245-279	341-382	581-615				
PVORI_NMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	293-327							
PVORI_PMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	1519-1575							
PVORI_PVMR	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS (PMV)	1-39	299-337	1474-1532					
PVORI_PVX	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	597-638	682-739						
PVORI_PVXCP	165 KD PROTEIN	POTATO VIRUS X (PVX)	516-550							

PI GENE	ALLNOTES	All Viruses (no bacteriophages)								
DI GENE	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVORI_SMYEA	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP) (PVX)	510-547							
PVORI_WCMVM	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYE	308-342	931-965						
PVORI_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	1240-1289							
PVP10_NPVAC	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	1240-1289							
PVP10_NPVOP	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	7-41							
PVP10_RBSDV	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-50							
PVP10_RGDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	339-382	395-429	506-556					
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS (RGDV)	186-233							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	220-254							
PVP11_WTV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS (RDV)	25-80	273-314						
PVP12_RDV	NONSTRUCTURAL PROTEIN PNS11	WOUND TUMOR VIRUS (WTV)	16-74							
PVP12_WTV	NONSTRUCTURAL PROTEIN P11	RICE DWARF VIRUS (RDV))	140-181							
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (WTV)	68-108							
PVP19_HSV6B	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	68-108							
PVP23_HCMVA	CAPSID ASSEMBLY AND DNA MATURATION PROTE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	189-231							
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-82	146-180						
PVP24_EBOV	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	47-81							
PVP26_HSVEB	MEMBRANE-ASSOCIATED STRUCTURAL PROTEIN V	EBOLA VIRUS	166-200							
PVP26_HSVSA	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	36-77							
PVP26_NPVOP	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	41-78							
PVP26_VZVD	P26 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	118-159							
PVP2_AHSV4	CAPSID PROTEIN VP26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	47-81							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	136-188	270-304	410-465	614-662	684-720	978-1056		
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	168-225							
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	77-111	559-593						
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	77-111	168-209						
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-153	576-610	668-702					
PVP2_ROTBR	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	72-106	247-301	405-453	461-495	895-929			
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	2-94	482-516	523-557	607-655	675-754			
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	2-94	483-517	524-558	608-656	676-755			
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	37-97	492-526	533-567	617-658	685-764			
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	1-50	52-99	194-228	515-551	599-643	705-746		
PVP30_ASFE7	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96	483-517	608-656	680-755				
PVP31_FRGJV	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75) (ASFV)	29-89							
PVP32_ASFB7	EARLY 31 KD PROTEIN	FROG VIRUS 3 (FV3)	227-261							
PVP35_EBOV	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	29-89							
PVP35_NPVAC	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	80-119							
PVP35_NPVBM	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	54-102							
PVP35_VACCC	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS (BMNPV)	54-102	224-258						
PVP35_VACCP	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	140-181							
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN L-IVP)	17-51							
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	140-181							
PVP3_AHSV4	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	141-182							
PVP3_BTV10	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	173-214	240-274	667-704					
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-255	853-894						
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-255	853-894						
PVP3_EHDV1	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA	214-255	853-894						
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	208-246	798-832	851-892					
PVP3_GFLV	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	208-246	735-770	798-832	851-892				
PVP3_RDV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS (GFLV)	96-133							
PVP3_ROTPC	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	299-337	817-872						
PVP3_ROTSI	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	24-58	229-263	329-395	406-446	640-688			

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
ENTRYNAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP40_EBV	INNER CORE PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-76	244-278	331-365	451-492	662-696			
PVP40_HSV11	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	433-467							
PVP40_HSVEB	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	206-257	599-633						
PVP40_ILTVT	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	180-245							
PVP40_SCMVC	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V8	1-35	509-557						
PVP40_VZVD	CAPSID PROTEIN P40	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	457-498							
PVP40_NPVAC	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	167-246	486-522						
PVP41_ROTSI	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	132-166							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	484-518	528-630					
PVP4A_VACCC	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	337-518	531-646					
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	355-359	718-763	794-828	857-891				
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	262-296	355-359	718-763	794-828	857-891			
PVP4B_FOWPV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	355-389	719-764	795-829	858-892				
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	131-172	296-330						
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-37	125-163	249-283					
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	3-37	125-163	249-283					
PVP4_BTV10	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	3-37	125-163	249-283					
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	579-617	619-653						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	569-607	609-643						
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	569-607	609-643						
PVP4_NCDV	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	569-607	609-643						
PVP4_RDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	484-518	528-630						
PVP4_ROTD4	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS (RDV)	388-437	444-478	627-679					
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	1-35	112-146	338-379	484-518	528-653			
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	1-35	484-518	528-630					
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	1-35	112-146	338-379	484-518	528-653			
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	1-35	112-146	227-274	345-379	484-518	528-653		
PVP4_ROTHI	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	117-151	476-519						
PVP4_ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	1-35	236-273	337-378	483-517	530-645			
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	1-35	112-146	227-274	338-379	484-518	531-646		
PVP4_ROTHU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	1-35	227-274	345-379	484-518	528-588			
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	1-35	337-378	483-517	527-652				
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	1-35	337-378	483-517	530-645				
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	1-35	227-274	338-379	484-518	531-645			
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	1-38	91-146	227-274					
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	1-35	236-273	337-378	483-517	530-644			
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70	1-35	237-273	344-378	483-517	527-652			
PVP4_ROTPS	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	1-35	237-273	344-378	483-517	527-652			
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	484-518	528-629					
PVP4_ROTPO	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	6-40	127-161	241-278	293-334	580-614			
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	1-35	236-273	337-378	483-517	530-564	569-638		
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	1-35	112-146	227-274	484-518	528-629			
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	1-38	112-146	227-274	338-379	484-522	531-646		
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	1-35	484-518	528-630					
PVP4_WTV	DE OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	1-35	227-274	345-379	484-518	531-646			
PVP5_AHSV4	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	28-62	565-621						
PVP5_BRD	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC	1-58	183-229						
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	45-86	98-276						

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	14-58	92-150	154-222	404-438				
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	14-58	92-150	154-222	404-445				
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	14-58	154-222	404-438					
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	14-58	92-143	148-222	404-438				
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-58	92-143	148-222	404-438				
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	14-58	92-222	404-438					
PVP5_RDV	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	24-58	92-126	163-233	291-325	399-433			
PVP5_WTV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS (RDV)	38-86	95-136	550-594					
PVP61_BTV10	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	434-503	547-581	751-798					
PVP61_NIRDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	163-215							
PVP61_NPVAC	PROBABLE NONSTRUCTURAL 41.0 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (NRDV)	128-202							
PVP62_BTV10	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	29-96	351-386						
PVP64_NPVOP	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	47-88	159-207	214-251					
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	296-361	431-479						
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	289-364	443-477					
PVP6_BTV11	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GNS	206-281							
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	159-211							
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	159-211							
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	68-102	159-211						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	12-78	163-211						
PVP6_RDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	44-78	135-187						
PVP6_WTV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS (RDV)	150-191	296-344	360-401					
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	144-178	286-334	400-434					
PVP74_NPVAC	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	144-178	286-334						
PVP74_NPVCF	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	387-456							
PVP75_HSVSA	P74 PROTEIN	CHORISTONEURA FUMIFERANA NUCLEAR POLYHEDROSIS VIRU	385-453							
PVP79_NPVAC	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	50-99	163-211	931-984					
PVP7_BTV10	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	363-397	406-440					
PVP7_BTV11	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA) (SEROTYPE	184-228							
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	201-235							
PVP7_BTV1A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	184-228							
PVP7_BTV1S	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	184-235							
PVP7_BTV2A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	184-228							
PVP7_EHDV1	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	184-228							
PVP7_RDV	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	16-50	134-178						
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS (RDV)	47-95	172-235						
PVP80_NPVAC	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS (WTV)	47-84	195-243	458-495					
PVP87_NPVOP	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	7-51	99-142	156-204	221-298				
PVP8_BTV10	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	80-162	410-451						
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	54-102	185-219						
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	54-102	185-219						
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	54-102	185-219						
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	54-102	185-219						
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	54-102	185-219						
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	54-102	185-219						
PVP8_FOWPV	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	54-102	185-219						
PVP9_RDV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	193-245							
PVP9_WTV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS (RDV)	13-47	186-226						
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (WTV)	140-212							
PVPG_BYDV1	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	140-212							
PVPHE_NPVAC	PUTATIVE GENOME-LINKED PROTEIN PRECURSOR	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	25-59							
PVPHE_NPVOP	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	146-223							

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)								
GENENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVPR_SIVSL	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	131-201	206-265						
PVPU_HVIA2	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	78-115							
PVPU_HVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-38							
PVPU_HVIBB	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HI	4-72							
PVPU_HVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE) (HIV	9-72							
PVPU_HVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (	4-59							
PVPU_HVIC4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV	4-72							
PVPU_HVIEL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-40							
PVPU_HVIH2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV	6-40							
PVPU_HVIJ3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HI	5-72							
PVPU_HVIJR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE) (HIV	2-50							
PVPU_HVIMA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE) (H	4-59							
PVPU_HVIND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HI	5-50							
PVPU_HVIPV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HI	4-40							
PVPU_HVIRH	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HI	4-72							
PVPU_HVIS1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (	1-39							
PVPU_HVIZ2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE) (H	4-59							
PVPU_SIVCZ	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	6-40							
PVPX_HV2D2	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	21-78							
PVRNA_BSMV	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7) (I	42-85							
PVS05_ROTSI	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-74	857-898						
PVS06_ROTBS	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	248-287							
PVS06_ROTGA	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-44							
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	69-144							
PVS06_ROTHC	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	24-58	64-103						
PVS06_ROTPC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	9-43							
PVS07_ROTBJ	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-43							
PVS07_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	2-36	282-320						
PVS07_ROTPS	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	88-153	199-236						
PVS07_ROTSI	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	88-162	202-236						
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	88-153	199-236						
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NS2/VP9	BOVINE ROTAVIRUS (STRAIN UK)	2-70	75-119	160-226					
PVS09_ROTB4	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-46	144-212	217-255					
PVS09_ROTB5	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN D641)	2-54	282-320						
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-43	282-320						
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	2-54	282-320						
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	2-54	282-320						
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	2-54	282-320						
PVS09_ROTBN	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK3)	2-54	282-320						
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN NCDV)	2-54	282-320						
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	2-43	282-320						
PVS09_ROTC7	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-54	282-320						
PVS09_ROTEL	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	285-326							
PVS09_ROTGA	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	282-320							
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	43-97							
PVS09_ROTH4	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	45-79							
PVS09_ROTH9	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-43	282-320						
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN RK9)	282-320							
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	282-320							
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN D37)	2-43	282-320						
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	282-320							
PVS09_ROTHL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	282-320							

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVS09_ROTID1	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	1-35	282-320						
PVS09_ROTIID	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-43	282-320						
PVS09_ROTIIP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN AND AND STRAIN D)	2-43	282-320						
PVS09_ROTIIR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	282-320							
PVS09_ROTIIS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	282-320							
PVS09_ROTIIT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	282-320							
PVS09_ROTIIV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	18-56	208-242	282-320					
PVS09_ROTIIW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	18-56	208-242	282-320					
PVS09_ROTP2	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-43	282-320						
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	282-320							
PVS09_ROTP4	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	282-320							
PVS09_ROTP5	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN OSU)	2-56	208-242	282-320					
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	282-320							
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	282-320							
PVS09_ROTPK	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN DEN-144)	18-56	208-242	282-320					
PVS09_ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN K)	18-56	282-320						
PVS09_ROTPY	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BAH-1)	18-56	208-242	282-320					
PVS09_ROTRH	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN YM)	1-35	282-320						
PVS09_ROTSI	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	282-320							
PVS10_ROTBN	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	282-320							
PVS10_ROTBS	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN NCDV)	33-161							
PVS10_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	17-58							
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN UK)	33-161							
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A28)	33-162							
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	33-162							
PVS10_ROTHC	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6)	33-162							
PVS10_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	121-158							
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	33-136							
PVS11_ROTGA	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	33-162							
PVS11_ROTGI	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	24-65	96-130						
PVS11_ROTH5	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP D / STRAIN IDIR)	9-68							
PVS11_ROTH6	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	100-145							
PVS11_ROTHB	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	107-144							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN B37)	107-144							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	111-145							
PVS11_ROTS1	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145							
PVS48_TBRVC	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-145							
PVSII_MUMP1	SATELLITE RNA 48 KD PROTEIN	TOMATO BLACK RING VIRUS (STRAIN C) (TBRV)	217-265							
PVSII_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL	9-46							
PVSII_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2), AND (STRAIN EDINGB	13-47							
PVSII_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	13-47							
PVSII_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	13-51							
PVSII_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	13-52							
PVSII_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46							
PVSII_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46							
PVSII_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-51							
PVSII_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	13-55							
PVSII_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	17-51							
PVSII_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAHASHI)	13-47							
PVSII_REOVD	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	13-47							
PVSII_REOVI	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	8-122	127-175	222-259					
PVSII_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	1-178							

PCGENE	ALLPROTS	All Viruses (no bacteriophages)								
ENTRYNAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVSI2_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	3-107	112-198						
PVSI2_REOVL	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	350-384							
PVSI2_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	350-384							
PVSI5_REOVJ	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	85-119							
PVSI2_HEVBU	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 2 / STRAIN D5/JONES)	7-45							
PVST2_HEVME	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA) (HEV)	318-352							
PVST2_HEVMY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	317-351							
PVST2_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	318-352							
PVST2_HEVRH	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	318-352							
PVI3A_CAPVI	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RHESUS)(HEV)	186-220							
PVT4_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	120-158							
PVT4_CAPVK	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN INS-1)	86-120							
PVTER_EDV	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	86-120							
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	235-290	595-629						
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451	617-658						
PVTER_HSVEB	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	468-502							
PVTER_HSVII	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	11-45							
PVTER_HSVSA	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	98-136	698-744						
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	226-267							
PVV_P14HA	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	588-622							
PVY1_SEND6	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	4-38							
PY101_SSVI	Y1 PROTEIN	SENDAI VIRUS (STRAIN 6/94)	104-138							
PY108_SSVI	HYPOTHETICAL 10 1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-80							
PY110_SSVI	HYPOTHETICAL 10 8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-65							
PY119_SSVI	HYPOTHETICAL 11 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	55-59							
PY11K_TYDVA	HYPOTHETICAL 11 9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-96							
PY12K_FCVC6	HYPOTHETICAL 11 2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	53-87							
PY12K_FCVF9	HYPOTHETICAL 12 2 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV) (FCV)	4-38							
PY12K_RHDV	HYPOTHETICAL 12 1 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	4-38							
PY12K_RHDV3	HYPOTHETICAL 12 7 KD PROTEIN IN COAT PROTEI	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV)	13-50							
PY13K_CLVK	HYPOTHETICAL 12 7 KD PROTEIN IN COAT PROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351) (RHDV)	13-50							
PY13K_CLVN	HYPOTHETICAL 13 1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	40-77							
PY13K_NPVOP	HYPOTHETICAL 13 1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	43-77							
PY13K_SSVI	HYPOTHETICAL 14 5 KD PROTEIN IN 39 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	16-67							
PY14K_SSVI	HYPOTHETICAL 13 2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	2-36	62-96						
PY16B_ADE02	HYPOTHETICAL 13 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	3-39							
PY16K_SSVI	HYPOTHETICAL PROTEIN C-16B	HUMAN ADENOVIRUS TYPE 2	119-166							
PY17K_SSVI	HYPOTHETICAL 15 6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-35	77-111						
PY18K_SSVI	HYPOTHETICAL 17 8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-45	119-153						
PY20K_SSVI	HYPOTHETICAL 18 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	102-136							
PY28K_SSVI	HYPOTHETICAL 20 4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-107							
PY2_SOCMV	HYPOTHETICAL 28 5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	127-180							
PY31K_SSVI	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	117-154							
PY32K_SSVI	HYPOTHETICAL 31 5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	3-93	100-141						
PY33K_NPVAC	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	230-278							
PY3_SOCMV	HYPOTHETICAL 37 7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-241							
PY3K9_SSV1	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	115-149							
PY7_SOCMV	HYPOTHETICAL 5 9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-51							
PY85K_SSVI	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94							
PY8_SOCMV	HYPOTHETICAL 85 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-125	503-537	546-587	658-700				
PYB01_FOWPM	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	46-83							
PYB04_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	74-115	184-221						

FEATURE	ALL VIRUSES (no bacteriophage)								
FEATURE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PY005_FOWPN	HYPOTHETICAL BAMHI ORF4 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	29-70						
PY006_FOWPN	HYPOTHETICAL BAMHI ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	1-37	61-95					
PY007_FOWPN	HYPOTHETICAL BAMHI ORF6 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	115-149						
PY010_FOWPN	HYPOTHETICAL BAMHI ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	344-378						
PY012_FOWPN	HYPOTHETICAL BAMHI ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-255						
PY013_FOWPN	HYPOTHETICAL BAMHI ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	4-47	113-153					
PYBRL2_EBV	HYPOTHETICAL BAMHI ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	122-163						
PYDH1_HSV57	HYPOTHETICAL BDLF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	458-506						
PY710_FOWPI	HYPOTHETICAL 24.1 KD PROTEIN IN DIFF 3 REGION	HERPESVIRUS SAIMIRI (STRAIN 484-73)	141-188						
PYGA1_HSV3AB	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	160-204						
PYGA1_HSV3AS	HYPOTHETICAL 33.6 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1) (MDHV)	176-211						
PYII22_VACCV	HYPOTHETICAL 33.6 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN NIS) (MDHV)	176-211						
PYII83_VACCV	HYPOTHETICAL 21.3 KD HINDIII-C PROTEIN	VACCINIA VIRUS (STRAIN WR)	34-78	93-119					
PYKR4_EBV	HYPOTHETICAL HOST RANGE 37.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	24-58	181-222					
PYL15_ADE41	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	16-58						
PYLR2_EBV	HYPOTHETICAL 12.4 KD PROTEIN IN 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	39-81						
PYOR1_COYAV	HYPOTHETICAL BLRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	64-125						
PYOR2_COYAV	HYPOTHETICAL 33 KD PROTEIN	CONGELINA YELLOW MOTTLE VIRUS (COYMV)	94-147						
PYOR3_LELV	HYPOTHETICAL 15 KD PROTEIN	CONGELINA YELLOW MOTTLE VIRUS (COYMV)	33-77						
PYORJ_TTV1	HYPOTHETICAL 28.4 KD PROTEIN	LELYSTAD VIRUS (LV)	100-134						
PYOR1_ADEGI	HYPOTHETICAL 69 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	14-54						
PYORA_TTV1	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRU	70-127						
PYORD_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	21-67						
PYORE_TTV1	HYPOTHETICAL 15.4 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	6-51	89-130					
PYORL_TTV1	HYPOTHETICAL 15.3 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	78-122						
PYORQ_TTV1	HYPOTHETICAL 36.8 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	1-45						
PYORT_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	1-43						
PYORW_TTV1	HYPOTHETICAL 28.7 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	4-38	281-315					
PYP12_RTBV	HYPOTHETICAL 12.1 KD PROTEIN	THERIAPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	4-89						
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	33-72						
PYP24_RTBV	HYPOTHETICAL P13 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTB	33-72						
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	51-101	106-157					
PYP48_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	51-101	106-157					
PYP48_RTBVP	HYPOTHETICAL P48 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	49-111	197-231					
PYP63_NPVAC	HYPOTHETICAL P48 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	49-111	197-231					
PYP7A_TNVA	HYPOTHETICAL PROTEIN IN P6.5 REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	32-73						
PYP0II_NPVAC	HYPOTHETICAL P7A PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	1-45						
PYPOL_IPNVI	HYPOTHETICAL 33.6 KD PROTEIN IN POLYHEDRIN 5	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	116-153						
PYQ1_AMEPV	HYPOTHETICAL 17.3 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE IASPER)	23-66						
PYQ1_AMEPV	HYPOTHETICAL 7.6 KD PROTEIN IN TK 5'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	9-41						
PYRF2_HSV6G	HYPOTHETICAL PROTEIN IN TK 3'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	1-57	62-96	149-183				
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	193-264						
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	134-175						
PYRF5_IRV6	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	232-286	404-442					
PYRR1_EBV	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYP	1-45						
PYSR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	96-139						
PYTR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	98-177						
PYUB3_NPVOP	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	390-424						
PYVAC_VACCC	HYPOTHETICAL 24.0 KD PROTEIN IN UBIQUITIN TR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	23-69	178-204					
PYVAG_VACCC	HYPOTHETICAL 14.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-63						
PYVAH_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-37						
PYVAN_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	78-113						

GENE	ALLNOTES	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
LENGTH	PROTEIN	VIRUS	23-57							
A13H_VACCC	HYPOTHETICAL 7.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-39							
A13C_VACCC	HYPOTHETICAL 7.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-48							
A13B_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-80							
A13B_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-80							
A13C_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	7-41							
A13B_VACCC	HYPOTHETICAL 7.7 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-51							
A13A_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	9-53							
	HYPOTHETICAL 8.1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)								

TABLE VI

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	1075117824	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	387-414	1087-1114	1142-1169								
P194K_TRVSY	POT 194 KD PRO	TOBACCO RATTLE VIRUS (STRAIN SYN)	106-133										
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133										
PAANT_HDVDJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133										
PAANT_HDVIT	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133										
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133									
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133									
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133										
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	72-106										
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE IUP-410[HUNICH])	14-36	67-94	424-437	570-625							
PATII_VACCV	94 KD A-TYPE INCLUSION PRO	VACCINIA VIRUS (STRAIN WR)	14-36	67-94	425-504	571-601							
PATII_VARV	81 KD A-TYPE INCLUSION PRO	VARIOLA VIRUS	67-94	368-335									
PATIJ_HSV11	ALPHA TRANS-IND FACTOR 78 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	100-135										
PATIJ_HSV1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	294-321										
PATID_HSVEB	ALPHA TRANS-IND FACTOR 83 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	315-319										
PATIN_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	14-36	67-94	426-498	572-620	677-841	914-990	1234-1261				
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	191-220										
PBLLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	84-111	117-144									
PCAJH_VACCC	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	84-111	117-144									
PCAJH_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	84-111	117-144									
PCAJH_VARV	CELL SURFACE-BINDING PROTEIN	VARIOLA VIRUS	312-339										
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	127-154										
PCHD_HSVSA	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	159-186										
PCOAI_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	160-187										
PCOAJ_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	48-76										
PCOAJ_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	37-64										
PCOAJ_POVJC	COAT PROTEIN VP2	POLYOMAVIRUS JC	170-204										
PCOAJ_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	22-49										
PCOAJ_POVMK	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN KILHAM)	178-205										
PCOAJ_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	120-147										
PCOAJ_AAV2	PROBABLE COAT PROTEIN 3	ADENO-ASSOCIATED VIRUS 2	3-30										
PCOAJ_TTV1	COAT PROTEIN TP3	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	194-221										
PCOAT_ADVG	COAT PROTEIN VP1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	96-123										
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	63-90	193-220	461-488								
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	64-91	194-221									
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/I)	63-90	193-220									
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	64-91	194-221	461-488								
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	63-90	193-219									
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	64-91	194-221									
PCOAT_CAMVV	COAT PROTEIN	CARNATION MOTTLE VIRUS	16-43										
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	41-68										
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-362										
PCOAT_CSMV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	62-89										
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	170-200										
PCOAT_FCVCA	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI68 FIV)	566-600										
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	518-543	566-600									
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	519-546	569-603									
PCOAT_FMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	220-247	358-385									
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	172-200	246-273									
PCOAT_MDSV	COAT PROTEIN	MISCANTHUS STREAK VIRUS	139-166										
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	106-133										
PCOAT_PAVIB	PROBABLE COAT PROTEIN VP1	HUMAN PARVOVIRUS B19	324-351	569-596									
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS (ISOLATE ATCC PV215)	46-73										
PCOAT_SCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-161										
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	21-48										
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	23-50										
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN BS-1)	3-30	41-68									
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	97-124										

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	232-259								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	104-131								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	104-131								
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	78-132								
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAHLEMENSE)	104-131								
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	104-131								
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O and KOKUBU)	104-131								
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	104-131								
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	104-131								
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	90-117								
PCOAT_TRVPS	COAT PROTEIN	TOBACCO RATTLE VIRUS (STRAINS PSG and PLB)	118-145								
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	10-37								
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-68								
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	41-68								
PDNBJ_ADE07	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 7	46-73								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	437-464								
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	333-368	512-539							
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-618								
PDNBI_POVJC	DNA-BINDING PROTEIN	POLYOMAVIRUS JC	2-29								
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	435-462	532-559							
PDNLI_VACCC	DNA LIGASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-131	172-199	358-385						
PDNLI_VACCV	DNA LIGASE	VACCINIA VIRUS (STRAIN WR)	104-131	172-199	358-385						
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	104-131	172-199	358-385						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	403-431								
PDPOL_CBEPV	DNA POLYMERASE	CHIRONOMUS BIENNIS ENTOMOPOXVIRUS	23-64	202-240							
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	338-365								
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	338-365								
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	370-416	621-655	772-799					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-780								
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	5-39								
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	5-39	304-331							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39								
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/TFDW294)	456-483								
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	443-470								
PDPOL_HSVII	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	328-366	710-737							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	625-652								
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	598-643								
PDPOL_NPVLD	DNA POLYMERASE	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	357-384								
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	770-797								
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	770-797								
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	769-796								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-242	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	289-330							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	290-331							
PDTXH_CORBE	DIPHTH TOXIN HOMOLOG CRM228 PREC	CORYNEPHAGE BETA	516-533								
PDTX_CORBE	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE BETA	523-560								
PDTX_COROM	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE OMEGA	516-533								
PDUT_HSVE4	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PDUT_HSVSA	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	179-213								
PE1BL_ADE07	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 7	126-153								
PE1BL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	136-163								
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	3-30								

PCGENE	107a178a4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA3	AREA3	AREA3	AREA2	AREA3	AREA2
PE1B5_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	122-173								
PE3I4_ADE02	EARLY E3B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	2-29								
PE3I4_ADE07	EARLY E3 15 3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	21-48								
PE3I9_ADE03	EARLY E3 19 1 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	5-32	70-100							
PE3I9_ADEJ5	EARLY E3 19 3 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	70-107								
PE3I1_ADEJ5	EARLY E3 20 6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	125-161								
PE3GL_ADEM1	EARLY E3 17 7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	38-66								
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	55-82								
PEFTI_VARV	EARLY TRANS FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	307-341	470-497							
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	420-468								
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	6-33	426-474							
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	395-452								
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-44	544-603	631-695						
PENV_BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	573-632	660-724						
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-377								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-377								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-377								
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	311-377								
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-377								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-377								
PENV_CAEVG	ENV POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	165-192								
PENV_EIAV1	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-1)	668-712								
PENV_EIAV2	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-2)	668-695								
PENV_EIAV3	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-3)	668-712								
PENV_EIAV5	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-5)	669-696								
PENV_EIAV9	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	668-712								
PENV_EIAVC	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	668-712								
PENV_EIAVW	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	668-712								
PENV_EIAVY	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	668-712								
PENV_FENV1	ENV POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	33-60	517-544							
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	650-680	722-749							
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	639-668	720-747							
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-679	721-748							
PENV_FLVC6	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	509-538								
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN A/GLASGOW-1)	490-519								
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510-539								
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516								
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	14-41	318-355	866-893						
PENV_FSVGA	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	510-539								
PENV_FSVGB	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GA)	490-519								
PENV_FSVSM	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN SM)	493-522								
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203	523-564							
PENV_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	342-376								
PENV_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	342-376								
PENV_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	342-376								
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-370								
PENV_HVIA2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	544-592	630-682	790-825						
PENV_HVIB1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	545-594	631-683	791-818						
PENV_HVIB8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	540-589	626-678	786-813						
PENV_HVIBN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	267-294	338-365	562-590	628-679	787-815				
PENV_HVIBR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	550-599	636-688	796-823						
PENV_HVIC4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	397-424	557-608	643-695	803-835					
PENV_HVIEL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	255-296	386-413	543-591	628-680					
PENV_HVIH2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIXD2 ISOLATE)	545-594	631-683	791-818						
PENV_HVIH3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIXD3 ISOLATE)	545-594	631-683	791-818						
PENV_HVIJ5	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NIH ISOLATE)	350-377	556-605	642-694	802-829					
PENV_HVIJR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RCSF ISOLATE)	336-363	622-675	781-811						

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PENV_HV1KB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	274-301	555-596	637-677	776-824					
PENV_HV1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	547-595	633-707	794-826						
PENV_HV1MF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	543-592	629-681	789-816						
PENV_HV1MN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	543-370	567-595	632-684	791-819					
PENV_HV1NS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	326-360								
PENV_HV1ND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	536-583	621-673	783-813					
PENV_HV1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	544-593	630-704	789-820						
PENV_HV1PV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	545-594	631-683	791-818						
PENV_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	280-307	551-378	554-602	640-692	800-832				
PENV_HV1S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	536-585	622-674	782-809					
PENV_HV1S3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	541-589	627-679	787-815						
PENV_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	543-593	631-683						
PENV_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	338-365	543-593	631-683	791-818					
PENV_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	334-361	536-584	622-674	782-809					
PENV_HV1Z2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2-CDC-Z34 ISOLATE)	255-296	542-591	628-680	790-820					
PENV_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-292								
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-297	545-593	630-682	792-822					
PENV_HV1Z8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	266-307	573-601	634-678	797-828					
PENV_HV1ZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE ILTB321 ISOLATE)	545-594	627-666	791-823						
PENV_HV2BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	532-591	621-648	653-697					
PENV_HV2CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	534-593	623-650	655-699						
PENV_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	61-88	523-550	535-582	644-688					
PENV_HV2GI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	60-87	524-551	556-583	613-640	645-693				
PENV_HV2NZ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	61-88	524-551	556-583	613-640	662-689				
PENV_HV2RO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	58-85	533-592	622-698						
PENV_HV2S2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24 ICP2)	442-476	527-554	559-586	648-682					
PENV_HV2SB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY)	557-584	614-673							
PENV_HV2ST	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	559-586	648-692					
PENV_MCFF	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-512								
PENV_MCFFJ	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-3)	488-515								
PENV_MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	517-544								
PENV_MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	510-539								
PENV_MLVFS	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	523-553								
PENV_MLVFF	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	523-553								
PENV_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	523-553								
PENV_MLVHO	ENV POLYPROTEIN	HOMULV MURINE LEUKEMIA VIRUS	510-540								
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
PENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	502-543								
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	458-485	562-589							
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	458-485	562-589							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	422-470								
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	57-84								
PENV_OMVVS	ENV POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	42-69	196-223	780-807						
PENV_RMCFV	ENV POLYPROTEIN	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	487-517								
PENV_SFVI	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	14-41	866-901							
PENV_SFVJL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	18-45	319-357	673-700	863-898					
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	269-310	561-588	592-619	652-679	697-724				
PENV_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	270-301	566-593	597-624	658-685	703-730				
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	257-291	336-372	548-603	634-708					
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	3-30	268-298	590-617	651-678					
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	253-289	336-366	526-584	627-654				
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	8-35	158-185	589-650	784-816					
PENV_SIVMI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83) ISOLATE)	120-150	550-609	671-715						
PENV_SIVMQ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	156-215	277-289							
PENV_SIVMX	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	553-608								

PCGENE	107:178:4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	549-608								
PENV_SIVML	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	281-308	553-617	642-669	691-718					
PENV_SIVS4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SAM14 ISOLATE)	286-313	554-595	646-722						
PENV_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	400-462								
PENV_SMRVH	ENV POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	409-471								
PENV_SRV1	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	22-62	773-800							
PENV_VILV	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-62	780-807							
PENV_VILV1	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	22-62	782-809							
PENV_VILV2	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	190-224								
PETF1_FOWPI	EARLY TRANSFACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	306-340	469-496	550-587						
PETF1_SFVKA	EARLY TRANSFACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	307-341	470-497							
PETF1_VACCC	EARLY TRANSFACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	307-341	470-497							
PETF1_VACCV	EARLY TRANSFACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	66-97	174-210	302-332						
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-97	174-210	302-332						
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82	VARIOLA VIRUS	109-139								
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	179-237								
PFIB2_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	178-216								
PFIB2_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	308-335								
PFIBP_ADE02	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 2	324-351	446-473							
PFIBP_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	339-366	461-488							
PFIBP_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	118-145	164-191							
PFIBP_ADEBJ	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	275-305	325-352							
PFIBP_ADEMI	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	138-169								
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	116-147								
PFOS_AVINK	P55-V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24	162-193								
PFOS_MSVFB	P55-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	270-297								
PGAG_AVISN	GAG POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	144-171								
PGAG_EIAVY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	621-648								
PGAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	396-442	447-474							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	91-118								
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	91-118								
PGAG_HV1J3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JR3 ISOLATE)	87-118								
PGAG_HV1MN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	88-115								
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
PGAG_HV2NZ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	88-115								
PGAG_HV2ST	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	270-297								
PGAG_IPIA	RETROVIRUS-RELATED GAG POLYPROTEI	HAMSTER INTRACISTERNAL A-PARTICLE	33-60	69-103	232-259						
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEI	MOUSE INTRACISTERNAL A-PARTICLE	96-130								
PGAG_IPMAE	RETROVIRUS-RELATED GAG POLYPROTEI	MOUSE INTRACISTERNAL A-PARTICLE	84-131	156-187							
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	84-116								
PGAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	84-131	156-187							
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	222-260								
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	497-531	624-651							
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	473-507								
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	88-115								
PGAG_SIVMK	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	88-115								
PGAG_SIVMS	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115								
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SAM14 ISOLATE)	88-115								
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	88-115								
PGAG_SMSAV	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	397-443								
PGAG_SRV1	GAG POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	223-261								
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	321-348							
PHELI_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	418-449								
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728							
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	208-242								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-242								
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-242								

PCGENE	107a17Ba4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	209-242								
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	208-242								
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	387-453								
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	24-51	371-437							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	381-451								
PHEMA_IACAO	HEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	9-36								
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	381-451								
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-58	382-441	494-528						
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	396-426								
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/13707/81)	396-426								
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	119-146	384-443							
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	381-451								
PHEMA_IADA2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	423-453	499-543							
PHEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	387-453								
PHEMA_IADA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	29-56	418-478							
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	381-451								
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-55	402-453	506-533						
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	371-437								
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	371-437								
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	371-437								
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	371-437								
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	371-437								
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/85)	371-437								
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	371-437								
PHEMA_IADIR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/83)	415-445								
PHEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76)	21-56								
PHEMA_IADM3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	387-453								
PHEMA_IADMA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	31-58								
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-55								
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	381-451								
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-55								
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	387-453								
PHEMA_IAEN6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/878/69)	24-51								
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77)	40-67	387-453							
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	177-221	384-442							
PHEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	381-451								
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	505-532								
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	504-531								
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	386-452								
PHEMA_IAHAR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HARBIN/1/88)	29-56								
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	29-56	194-221	388-457						
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/73)	29-56	194-221	388-457						
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	386-452								
PHEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	386-452								
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	386-452								
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	29-56	194-221	388-457						
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	29-56	194-221	388-457						
PHEMA_IAHMI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	386-452								
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	386-452								
PHEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-56	194-221	388-457						
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	29-56	194-221	388-457						
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	386-452								
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	386-452								
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-56	194-221	388-457						
PHEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/137/72	29-56	194-221	388-457						

PCGENE	1071117b14	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA4	AREA5	AREA1	AREA1	AREA1	AREA1
PIEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	386-453							
PIEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	386-453							
PIEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	386-453							
PIEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	196-223							
PIEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	39-56	423-478						
PIEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	39-56	423-478						
PIEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	380-450							
PIEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	383-455							
PIEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6754/78)	387-453							
PIEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	40-67	387-453						
PIEMA_IAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	40-67	387-453						
PIEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	24-51	371-437						
PIEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	31-58	382-441						
PIEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	387-453							
PIEMA_IAPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PR/8/34)	505-534							
PIEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	39-56	423-478						
PIEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QU/7/70)	24-51							
PIEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	381-451							
PIEMA_IAS63	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	381-451							
PIEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	28-56	500-547						
PIEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/513/85)	110-146	384-443						
PIEMA_IATAI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	39-56							
PIEMA_IATK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	415-445							
PIEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	381-451							
PIEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	507-534							
PIEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	424-454	491-539						
PIEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	33-62	194-221	381-422					
PIEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1966)	418-449	500-536						
PIEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	31-55							
PIEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	40-67	387-453						
PIEMA_IAUS3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	39-56	423-478						
PIEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	41-68	388-454						
PIEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	424-477							
PIEMA_IAXIA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XIANFENG/2/89)	39-56							
PIEMA_IAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	40-67	387-453						
PIEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	377-437							
PIEMA_IAZH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1346/82)	377-437							
PIEMA_IAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	418-478	506-547						
PIEMA_IAZNJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	418-478	506-547						
PIEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UK/EU/1/84)	387-453							
PIEMA_IBBEE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	400-431	439-483						
PIEMA_IBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/4/1)	390-421	428-473						
PIEMA_IBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	398-429	437-481						
PIEMA_IBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	391-418	428-473						
PIEMA_IBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	399-430	438-482						
PIEMA_IBMA	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	389-420	428-472						
PIEMA_IBNE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/NETHERLANDS/45/86)	393-424	432-476						
PIEMA_IBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	398-429	437-481						
PIEMA_IBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	398-429	437-481						
PIEMA_IBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	391-422	430-474						
PIEMA_IBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	393-424	432-476						
PIEMA_IBVR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/504/88)	400-431	439-483						
PIEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	495-571							
PIEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	483-559							
PIEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	483-559							
PIEMA_INCHY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/81)	483-559							
PIEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	496-572							

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMA_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	482-558								
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	482-558								
PHEMA_INCNA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/NARA/82)	482-558								
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	483-559								
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	483-559								
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	483-559								
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	483-559								
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	483-559								
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	64-91								
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	64-91								
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	64-91								
PHEMA_NDVH	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	64-91								
PHEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	64-91								
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	64-91								
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	64-91								
PHEMA_NDVTG	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B./48)	64-91								
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	64-91								
PHEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-66	46-73							
PHEMA_PI1HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	79-110	366-393							
PHEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PHEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/124854/74)	27-61								
PHEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	27-76								
PHEMA_PI3HU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	23-70								
PHEMA_PI3HV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/83)	27-61								
PHEMA_PI3HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	27-61								
PHEMA_PI3HX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/73)	27-61								
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POXVIRUS	166-214	256-283							
PHEMA_SEND5	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	79-106								
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	79-106								
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	79-106								
PHEMA_SENDJ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	79-106								
PHEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	79-106								
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	22-52	394-421							
PHEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	119-146	175-202	216-243						
PHEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	109-146	175-202	216-243						
PHEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	119-146	175-202	216-243						
PHEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	109-146	175-202	215-242						
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	111-148	177-211	214-244						
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	100-134								
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	100-134								
PHEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPES 3 and 7	97-127								
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	146-173	359-386	433-460						
PHEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	348-375								
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	396-423								
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	305-338								
PHI38_COWPX	HEMORRHAGE-INDUCING 38 KD PROTEIN	COWPOX VIRUS	28-55								
PHRG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	462-489								
PI196_ASFB7	LATE PROTEIN I196L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	12-43								
PI226_ASFB7	LATE PROTEIN I226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	113-147								
PIBMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	17-44								
PIBMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	17-44								
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	383-410								
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	6-33								
PIBMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	372-407								
PIBMP_SOCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	3-48	331-358							
PIC1I_HCMVA	PROB PROC & TRANSPORT PRO UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324								

PCGENE	[07:17]Tbl4	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
TITLE_NAME	PROTEIN	VIRUS	58-85	481-527							
PIC1I_HSV1A	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN 11)	661-691								
PIC1I_MCMV5	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	240-255								
PIE3I_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40-67								
PIE4I_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	48-78								
PIE4I_HSV1A	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	23-49								
PIE5I_HCMVA	HYPOTHETICAL PROTEIN IE1.3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	24-162								
PIE7I_HCMVA	HYPOTHETICAL PROTEIN IE1.1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-67								
PIE7I_HCMVA	HYPOTHETICAL PROTEIN IE1.1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	106-150								
PIE7S1_FSVGA	TYROSINE KINASE TRANSF PROTEIN FES	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	218-252								
PIE7GA_FSVGA	TYROSINE KINASE TRANSF PROTEIN GAG	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	337-362								
PIE7M5_FSVMD	FMS TYROSINE KINASE TRANSF PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	135-243	249-297							
PIE7P5_FUSV	TYROSINE KINASE TRANSF PROTEIN FPS	FUJINAMI SARCOMA VIRUS	47-84								
PIE7TH_AAEPV	THYMIDINE KINASE	AARACTA MOOREI ENTOMOPOXVIRUS	41-68								
PIE7TH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1)	140-186								
PIE7TH_HSV1A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	124-161								
PIE7TH_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN TISHIMINE V882)	227-262								
PIE7I4_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	491-518								
PIE8I_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	141-168								
PIE8I_VACCW	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	141-168								
PIE8I2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-174								
PIE8I2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-174								
PIE8I_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-74								
PIE8I_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	47-74								
PIE8O5_AVISU	ROS TYROSINE KINASE TRANSF PROTEIN	AVIAN SARCOMA VIRUS (STRAIN URA)	111-138								
PIE8YK_AVIBU	TYROSINE KINASE TRANSF PROTEIN RYK	AVIAN RETROVIRUS RPL30	22-49								
PL100_ADE2I	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	199-231								
PL10I_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-173								
PL10I_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-175								
PL10I_EBVA	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJI)	148-175								
PL10I_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	294-321								
PM2CL_SFVEA	MONA CAPPING ENZYME, LARGE SUBUNI	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-156	289-316	497-524	622-656					
PM2CL_VACCC	MONA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-112	291-318	630-657						
PM2CL_VACCV	MONA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN WR)	85-112	291-318	630-657						
PM2CL_VARV	MONA CAPPING ENZYME, LARGE SUBUNI	VARIOLA VIRUS	85-112	291-318	630-657						
PM2E_ASFB7	MONA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	279-313								
PM3V9_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN W)	176-197								
PM3V9_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	176-197								
PM3V9_OKSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90								
PM3V9_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LIIA)	46-80								
PM3V9_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LII)	46-80								
PM4TC1_CHVNI	MODIFICATION METHYLASE CVBII	CHLORELLA VIRUS NC-1A	143-170	229-256							
PM4TC1_CHVPI	MODIFICATION METHYLASE CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	4-31	126-172							
PM4TC_AVDAG	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	233-266	313-402							
PM4TC_AVDMC	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	233-267	376-403							
PM4TC_AVDMD	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS HB1	233-267	376-403							
PM4TC_AVDME	MTC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	219-268	377-404							
PM4TC_AVDOK	MTC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	223-261	370-397							
PM4TC_FLV	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	193-420								
PM4TC_FLVTT	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420								
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BEANE VIRUS	49-76	129-156							
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	85-113								
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	96-123								
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	48-75	189-220							

PCGENE	107s17Bs4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C68031)	223-271								
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	140-174								
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN N653514)	48-74								
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	191-227								
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	191-227								
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH ISOLAT	191-227								
PNCAP_CVPRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	191-227								
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	238-265								
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	182-209								
PNCAP_HAZVJ	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC280)	6-33	256-281							
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP D / STRAIN 18537)	4-31	74-108	112-141						
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PNCAP_LASSG	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	64-99	147-174							
PNCAP_LASSJ	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	64-99	467-504							
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	64-97								
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	41-68	192-219							
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	64-99								
PNCAP_PI1HC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	377-404	455-482							
PNCAP_PI1HW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	377-404	444-488							
PNCAP_PI3H4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH J47885	376-403								
PNCAP_PTPV	NUCLEOCAPSID PROTEIN	PUNTA TORO PHLEBOVIRUS	3-30								
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	2-29								
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	2-29								
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-120								
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-167								
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	133-167								
PNCAP_RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	133-167								
PNCAP_SEND5	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANT5)	363-404								
PNCAP_SEND6	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	363-404								
PNCAP_SEND2	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	363-404								
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	4-31								
PNCAP_SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	507-534								
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	50-77								
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	6-33								
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	68-102								
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	284-314								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MAKAH)	149-176	284-314							
PNCAP_VSVIG	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW	56-83								
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN	67-94	338-365							
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	56-83								
PNEF_HV1EL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119								
PNEF_HV1ND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-119								
PNEF_HV1Z6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	96-137								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	47-81								
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82	33-64								
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	16-43	50-91							
PNRAM_IADAI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	51-81								
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	21-48								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74)	197-224	386-413							
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	46-76	364-400						
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	50-81								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	50-81								
PNRAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71H-A/BELLAMY/42N)	16-43	50-81							
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	16-43	50-81							
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	16-43								

PCGENE	1976117Jul	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS								
PNRAM_IAFLUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/HOS1)	49-88							
PNRAM_IAFRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	49-82							
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-81							
PNRAM_IAWS4	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/ANE/1/84)	49-88							
PNRAM_IAWSN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	16-43							
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-33							
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	283-310							
PNSI_BDEV	PROB NONSTRUC PRO PRECURSOR	BORNAVIRUS DENSONUCLEOSIS VIRUS	42-69							
PNSI_BDEV	PROB NONSTRUC PRO PRECURSOR	BORNAVIRUS DENSONUCLEOSIS VIRUS	95-122							
PNS5_DNSVN	NON-STRUCTURAL PROTEIN	DOMATIENS NECROTIC SPOT VIRUS (STRAIN ML-01)	5-32	412-467						
PNS5_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNHIMR-01)	5-32							
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L)	5-32							
PNTP1_ANEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69							
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-166	247-324	324-351					
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	65-92	394-421	514-567					
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	65-92	394-421	514-567					
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	100-127	428-447	455-493					
PP100_HSVAU	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	81-108	189-216	688-715	785-812				
PPAJ1_VACCC	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115							
PPAJ1_VACCV	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	88-115							
PPAJ1_VARV	POLY(A) POL CATALYTIC SUBUNIT	VARIOLA VIRUS	118-145							
PPAP2_CAPVK	POLY(A) POL REG SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	27-54							
PPAP2_FOWPV	POLY(A) POL REG SUBUNIT	FOWLPOX VIRUS	27-54							
PPE12_NPVAC	12.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	61-105							
PPE13_NPVOP	11.5 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	61-95							
PPE38_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	204-248							
PPE48_NPVAC	48.3 KD IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-38	51-78						
PPEN3_ADECX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SAJ)	96-123							
PPOL1_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	1372-1399	1775-1802	2236-2263					
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	1374-1401	2234-2261						
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	481-508	1909-1941						
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	170-197	616-617	918-985	1161-1195				
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	1096-1123							
PPOL2_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	801-828						
PPOL2_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	240-267	801-828						
PPOL2_GCMV	RNA2 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	11-38							
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	549-576							
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	982-1009							
PPOLO_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	17-44	1030-1057	1145-1172					
PPOLO_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	639-660	1082-1112	1103-1130	2233-2261	2474-2501	2699-2626	3613-3642	
PPOLO_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	1303-1333	2143-2171	2319-2346	2802-2829	3323-3350			
PPOLO_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-123							
PPOLO_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	7-34	664-694	1062-1099	1900-1930				
PPOLO_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GREGGS)	1040-1076							
PPOLO_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	645-672	841-868	1021-1057					
PPOLO_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1024-1060	1881-1908						
PPOLO_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	644-671	1022-1058						
PPOLO_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1024-1060							
PPOLO_CYVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	126-154							
PPOLO_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1858-1885	2890-2917	2969-3016					
PPOLO_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN 16611)	1544-1571	1858-1885	2908-2935	2982-3016	3113-3147			
PPOLO_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK11)	1544-1571	1858-1885	2483-2510	2908-2935	2982-3016	3117-3147		
PPOLO_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	1544-1571	1858-1885	2908-2935	3113-3147	3146-3173			
PPOLO_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	1544-1571	1858-1885	2905-2932	3079-3013	3114-3144	3143-3170		
PPOLO_DEN3T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN TONGA 1974)	1534-1561	1848-1475						
PPOLO_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	837-864	1342-1369	1817-1844	2484-2521	2980-3014	3145-3172		
PPOLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2885-2910	2911-3011	3342-3369					
PPOLO_ECTO	GENOME POLYPROTEIN	ECTROVIRUS 11 (STRAIN GREGORY)	213-240							

BAD ORIGINAL

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	70-108	1484-1518	1522-1563						
PPOLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETOGENIC)	70-97	1486-1520	1524-1565						
PPOLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	70-97	1486-1520	1524-1565						
PPOLO_ENMGJ	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN J7A)	70-108								
PPOLO_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	3-41								
PPOLO_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	302-329	1119-1146							
PPOLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	301-328	1119-1146							
PPOLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIDPS)	1119-1146								
PPOLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU [C-SP])	101-128								
PPOLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	702-729								
PPOLO_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	699-726	1195-1232	1303-1333	1434-1461	3068-3095	3406-3440			
PPOLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	699-726	1195-1232	1068-3095	3406-3440	3532-3559				
PPOLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	702-729	1045-1072							
PPOLO_HCVJ	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE J)	702-729	1045-1072							
PPOLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	374-401	2089-2116							
PPOLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	1049-1076	2089-2116							
PPOLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	378-405	702-729	1045-1072						
PPOLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	702-729	1045-1072							
PPOLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	702-729	1045-1072							
PPOLO_HPAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	203-237	1021-1048	1117-1149	1454-1481					
PPOLO_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	203-237	1021-1048	1117-1149	1454-1481					
PPOLO_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	203-237	1021-1048	1117-1149	1454-1481					
PPOLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	203-237								
PPOLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	182-216								
PPOLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	203-237	1021-1048	1103-1149						
PPOLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	203-237	1021-1048	1103-1149						
PPOLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	203-237	1021-1048	1103-1149						
PPOLO_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	207-241	1025-1052	1115-1192						
PPOLO_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	203-237								
PPOLO_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14	17-44	559-586	652-679	1877-1904					
PPOLO_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B	1132-1159	1855-1882							
PPOLO_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2	1125-1152	1552-1593							
PPOLO_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89	883-910	1141-1168	1566-1607	1862-1889					
PPOLO_HUEV7	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	876-910								
PPOLO_IBDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	231-277								
PPOLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	214-248	983-1010	2796-2823						
PPOLO_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	214-248	983-1010	2796-2823						
PPOLO_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	214-248	983-1010	2796-2823						
PPOLO_JASVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	141-175	911-938							
PPOLO_KUNJM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	980-1007								
PPOLO_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	431-465	1634-1661							
PPOLO_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	431-465								
PPOLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS	431-465								
PPOLO_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 526)	151-185								
PPOLO_MCFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT	671-698	3056-3083	3303-3330						
PPOLO_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	10-37								
PPOLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	212-256								
PPOLO_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	24-51	946-973							
PPOLO_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	377-404	704-738	831-858	900-927	1167-1201	1485-1512	1787-1814	2433-2464	
PPOLO_POL1M	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1060-1100	1901-1931							
PPOLO_POL1S	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	670-697	1063-1101	1903-1933						
PPOLO_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1061-1099	1901-1931							
PPOLO_POL2W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1061-1099	1901-1931							
PPOLO_POL32	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23127)	1060-1098	1900-1930							
PPOLO_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P3/LEON/37 AND P3/LEON 12A[1]B)	1060-1098	1900-1930							
PPOLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	921-948	1498-1525	2771-2798						
PPOLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	1146-1181								

PCGENE (07:17:24 4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FULL NAME	VIRUS									
PROLO_PPVNA	PLUM POX POTYVIRUS (ISOLATE NAT)	920-947	1497-1524	2770-2800						
PROLO_PPVRA	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	920-947	1497-1524	2770-2797						
PROLO_PEMVII	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA)	500-527								
PROLO_PRSVII	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA 5-1)	391-418								
PROLO_PRSVW	PAPAYA RINGSPOT VIRUS (STRAIN W)	489-516								
PROLO_PEMVW	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPD1)	231-315	1132-1177	1510-1537						
PROLO_PVYC	POTATO VIRUS Y (STRAIN O (PVY)	433-460	701-735							
PROLO_PVYHU	POTATO VIRUS Y (STRAIN HUNGARIAN)	218-245	433-460	701-735	1486-1513	1777-1811				
PROLO_PVYN	POTATO VIRUS Y (STRAIN N)	433-460	701-735	1486-1511	1777-1811					
PROLO_PVYO	POTATO VIRUS Y (STRAIN O)	433-460	701-735							
PROLO_PVYVI	POTATO VIRUS Y (ISOLATE P-131)	1124-1151	2707-2734							
PROLO_SUMVS	SUGARCANE MOSAIC VIRUS (STRAIN SC)	10-37								
PROLO_SVDVH	SWINE VESICULAR DISEASE VIRUS (STRAIN IVT 76)	1024-1060								
PROLO_SVDVU										
PROLO_TBEVS	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SUFJIN)	87-121	234-272	1632-1661	2265-2292	2909-2936				
PROLO_TBEVW	BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	1032-1059								
PROLO_TEV	TOBACCO ETCH VIRUS	845-872	1148-1175	1416-1443	1773-1800					
PROLO_TMEVB	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8386)	79-111	200-237							
PROLO_TMEVD	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	90-117	200-237							
PROLO_TMEVG	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	90-117	200-237							
PROLO_TUMV	TURNIP MOSAIC VIRUS	232-263	771-800							
PROLO_TVMV	TOBACCO VEIN MOTTLING VIRUS	408-433	676-704	2708-2742						
PROLO_WMV2	WATERMELON MOSAIC VIRUS II	202-229								
PROLO_WNV	WEST NILE VIRUS	210-234	3385-3412							
PROLO_YEFV1	YELLOW FEVER VIRUS (STRAIN 17D)	436-463								
PROLO_YEFV2	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	436-463								
PROLO_ZYMV	ZUCCHINI YELLOW MOSAIC VIRUS	69-96								
PROLI_POLIM	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1063-1101	1903-1933							
PROLI_BEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1402-1467	1864-1921						
PROLI_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	445-472							
PROLI_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	1034-1061							
PROLI_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	219-246	348-376						
PROLI_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	219-246	348-376						
PROLI_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	219-246	348-376						
PROLI_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	218-245	348-375						
PROLI_MDBDV	NONSTRUCTURAL POLYPROTEIN	MODEBURG VIRUS	933-992							
PROLI_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	2451-2480							
PROLI_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	113-147	1632-1684						
PROLI_RUBVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	1037-1084	1417-1464	2418-2445					
PROLI_RUBVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	146-173	1083-1114						
PROLI_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	2060-2087							
PROLI_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1134-1161							
PROLI_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	936-970							
PROLI_WEEV	NONSTRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	4-31							
PROLS_BDV3	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	231-258							
PROLS_BDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	231-258							
PROLS_BDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	231-258							
PROLS_BDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	231-258							
PROLS_BDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	212-239							
PROLS_BDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	231-258							
PROLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	1346-1381							
PROLS_RUVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	939-973							
PROLS_RUVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973							
PROLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1138-1165							
PROLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	1138-1165							
PROLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	920-947							
PROL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	675-706	715-742						

BAD ORIGINAL

PCGENE	10/11/96	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 3	AREA 4	AREA 2	AREA 1	AREA 2
FILENAME	PROTEIN	VIRUS								
PROL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN COWK)	884-924							
PROL_COYMV	PUTATIVE POLYPROTEIN	COWPEA MOSAIC VIRUS	333-360	338-865	1075-1102	1178-1205	1313-1347			
PROL_EIAV3	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	472-505	826-853						
PROL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	472-505	826-853						
PROL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	471-504	825-852						
PROL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	532-599	837-854						
PROL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-475							
PROL_FMVD	ENZYMATIC POLYPROTEIN	FOWLPOX MOSAIC VIRUS (STRAIN DXS)	405-438							
PROL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703						
PROL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-713							
PROL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	674-713							
PROL_HVIA2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	218-245	620-661						
PROL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	230-257	632-673						
PROL_HVIB3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	230-257	632-673						
PROL_HVIBR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	230-257	632-673						
PROL_HVIEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-244	624-660						
PROL_HVIH2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	218-245	620-661	921-951					
PROL_HVIJR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	222-249	624-665						
PROL_HVILAI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (LAI ISOLATE)	211-244	476-510	619-660					
PROL_HVIMN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	221-248	633-664						
PROL_HVIN5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	218-245	620-661						
PROL_HVIND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-244	624-660						
PROL_HVIOY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	218-245	620-661						
PROL_HVIPV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	230-257	637-673						
PROL_HVIRM	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	217-244	619-660						
PROL_HVIU4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE U)	217-244	513-548	619-660					
PROL_HVI23	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZZ/CDC-234 ISOLATE)	217-244	619-660						
PROL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-522							
PROL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	471-562							
PROL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600							
PROL_HV2D3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	491-548							
PROL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562							
PROL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	471-519							
PROL_HV2R0	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-563							
PROL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	472-563							
PROL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-562							
PROL_IHA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	200-237	334-381	461-499					
PROL_IMA	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	111-138	303-329	400-427					
PROL_IMAJ	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	130-157	221-248						
PROL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	204-231							
PROL_MLVAK	POL POLYPROTEIN	AKA MURINE LEUKEMIA VIRUS	453-480							
PROL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	805-832							
PROL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	805-832						
PROL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217						
PROL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	574-612	676-697						
PROL_OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	63-94	471-505	871-900					
PROL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	797-824							
PROL_RTBV	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	1-44	58-91	176-203	203-229	410-437	447-476	1022-1049	
PROL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	1-44	58-91	176-203	203-229	410-437	447-476	1022-1049	
PROL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	437-454							
PROL_SIVA1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	547-574	637-671					
PROL_SIVA3	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	45-72							
PROL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	11-98							
PROL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	418-463	482-516	642-669					
PROL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/TCLONE GRI-1)	478-515							
PROL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	457-491							
PROL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	243-280	628-685						

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	227-254	636-670							
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	533-560								
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	533-560								
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMM4 ISOLATE)	496-523								
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE)	499-526								
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	601-628								
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	268-295	348-419							
PPOL_SRVI	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	578-612	670-697							
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	490-524	881-919							
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	89-116	490-524	881-919						
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	490-524	881-919							
PPR73_MMTVB	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	288-315								
PPR73_MMTVC	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	45-79								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	167-201								
PPYHD_CPVBM	POLYHEDRIN PRECURSOR	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	37-71								
PPYHD_NPVAC	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47								
PPYHD_NPVAS	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-48	201-238							
PPYHD_NPVBM	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-46								
PPYHD_NPVBS	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVHC	POLYHEDRIN	HYPHANTRIA CUNEA NUCLEAR POLYHEDROSIS VIRUS	13-40								
PPYHD_NPVLD	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVMB	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVOP	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47								
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVPF	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVSE	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	14-48								
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48								
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68								
PREV_VILV	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-62								
PRIR1_ASFM2	RIBONUC-DIPHOSPH REDUCT LARGE CHA	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL. 20/1)	7-41	88-119	163-190						
PRIR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	622-649								
PRIR1_HSVEB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PRIR1_HSVSA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	324-351								
PRIR1_VACCC	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-401								
PRIR1_VACCV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN WR)	367-401								
PRIR1_VARV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARIOLA VIRUS	367-401								
PRIR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146								
PRIR2_HSVEJ	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	90-117								
PRPP4_VACCV	RNA-POL-ASSOC TRANS SPEC FACTOR	VACCINIA VIRUS (STRAIN WR)	41-68	513-540							
PRPP4_VARV	RNA-POL-ASSOC TRANS SPEC FACTOR	VARIOLA VIRUS	41-75	77-104	513-540						
PRPO1_VACCC	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-264	587-616	810-837	961-992					
PRPO1_VACCV	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN WR)	237-264	587-616	810-837	961-992	1011-1038				
PRPO1_VARV	DNA-DIRECTED RNA POL 147 KD	VARIOLA VIRUS	237-264	587-616	810-837	961-992					
PRPO2_CAPVK	DNA-DIRECTED RNA POL 132 KD	CAPRIPOXVIRUS (STRAIN KS-1)	19-63	114-155							
PRPO2_COWPX	DNA-DIRECTED RNA POL 132 KD	COWPOX VIRUS	211-241	481-509							
PRPO2_VACCV	DNA-DIRECTED RNA POL 132 KD	VACCINIA VIRUS (STRAIN WR)	211-241	481-509							
PRPO2_VARV	DNA-DIRECTED RNA POL 132 KD	VARIOLA VIRUS	211-241	481-509							
PRPO4_CAPVK	DNA-DIRECTED RNA POL 35 KD	CAPRIPOXVIRUS (STRAIN KS-1)	36-63								
PRPO7_VACCV	DNA-DIRECTED RNA POL 19 KD	VACCINIA VIRUS (STRAIN WR)	8-35	43-70							
PRPO7_VARV	DNA-DIRECTED RNA POL 19 KD	VARIOLA VIRUS	43-70								
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1560								
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	888-915	1639-1673							
PRRP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	575-602								
PRRP1_IAANN	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	119-146								
PRRP1_IADHO	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	119-146								
PRRP1_IAFPR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146								
PRRP1_IAGUS	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	119-146								

PCGENE	107a178a4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRP3_IAHLO	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	119-146								
PRRP3_IAHTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	119-146								
PRRP3_IAKOR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	119-146								
PRRP3_IALE1	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146								
PRRP3_IALE2	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	119-146								
PRRP3_IAMAN	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	119-146								
PRRP3_IANT6	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	119-146								
PRRP3_IAPI0	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	119-146								
PRRP3_IAPUE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	119-146								
PRRP3_IARUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	119-146								
PRRP3_IASIN	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	119-146								
PRRP3_IATKM	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	119-146								
PRRP3_IAVIT	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	119-146	327-354							
PRRP3_IAWIL	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	119-146								
PRRP3_IAZH2	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	119-146								
PRRP3_IAZIU	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	119-146								
PRRP3_IAZI1	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119-146								
PRRP3_IAZTF	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	119-146								
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	137-194								
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	164-194								
PRRP3_INBSI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	137-194								
PRRP3_IABUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	537-567								
PRRP3_IACHI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	331-358								
PRRP3_IAEPR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	331-361	480-507							
PRRP3_IAZTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	487-514								
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	2-33	472-509							
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	2-33	472-509							
PRRP3_INCBE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	509-536								
PRRP3_INCJJ	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	509-536								
PRRP3_THOGV	RNA-DIRECTED RNA POL SUB P3	THOGOTO VIRUS	149-176	358-385							
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	516-543	724-751	1971-2008	3781-3811					
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	624-651	4326-4353							
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	27-54	557-584	943-984						
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	885-915	1129-1170							
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	885-915	1129-1170							
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	20-47	353-380	385-412						
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1510-1547	2296-2331	2547-2574						
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	165-200	416-443							
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	1032-1059								
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	80-114	317-350	1802-1861	1892-1919					
PRRPL_CDVO	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	24-51								
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	404-433	461-510	564-591	738-765	905-946	1993-2020			
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192	210-237	667-694	788-815	1007-1034	1138-1165	1453-1480	1776-1803	2062-2089
PRRPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	991-1018	1143-1170	1490-1524	1811-1838	2029-2067	2216-2266			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	991-1018	1490-1524	2239-2267						
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	95-122	196-223	2121-2148						
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	111-142	780-807	1602-1632						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/43)	250-284	477-504	1979-2013						
PRRPL_PI3HT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	322-349	1564-1598	1687-1721	1901-1946					
PRRPL_PI3H4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	52-86	116-163	608-638	1081-1123	1994-2036	2115-2142			
PRRPL_PUUMH	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	388-415	557-591	731-758	864-891	926-953	1940-1971	1998-2025		
PRRPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	204-231	605-632	2068-2123						
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	204-231	605-632	2068-2123						
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	855-882								
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	1536-1563	1653-1687							
PRRPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	629-656	1082-1116	1729-1756	2145-2180					
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	449-476	902-936	1549-1576	1965-2000					

PCGENE	1097:1781:4	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	629-656	1082-1116	1729-1756	2145-2180					
PRRPL_SEOUH	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	461-488	564-591	731-758	905-932					
PRRPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	1096-1123	1250-1277	1680-1710	2120-2147					
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	825-850	1092-1119	1490-1520	1973-2000	2080-2107				
PRRPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIII/BR-01)	477-504	542-573	1119-1150	1195-1229	1330-1357	1415-1442	1671-1698	1857-1884	2083-2110
			2166-2193	2324-2368	2771-2798						
PRRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	142-187	1037-1071	1304-1331						
PRRPL_VSVIH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN HAZELHU	1530-1557	1809-1836							
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	1205-1232	1809-1836							
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	1540-1567	1768-1798							
PRRPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	228-264	564-591							
PRRPO_BWYVF	PUTATIVE RNA-DIR RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	356-383								
PRRPO_BYDVI	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	772-799								
PRRPO_BYDVP	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	772-799								
PRRPO_BYDVR	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	772-799								
PRRPO_CARMV	PUTATIVE RNA-DIR RNA POL	CARNATION MOTTLE VIRUS	93-127	277-304	667-694						
PRRPO_CGMVS	PUTATIVE RNA-DIR RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	387-414	1040-1067							
PRRPO_IBDVS	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	336-363	392-419							
PRRPO_IBDVA	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	661-688	717-744							
PRRPO_IPNVI	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	773-800								
PRRPO_IPNVS	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	773-800								
PRRPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	834-886	1052-1079							
PRRPO_PPMVS	PUTATIVE RNA-DIR RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	402-429	709-736	1072-1099						
PRRPO_REOVD	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	61-88								
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	61-88								
PRRPO_ROTBR	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	68-95	218-245	791-818						
PRRPO_ROTBU	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	65-95	218-245	791-841	975-1002					
PRRPO_ROTPC	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	75-102	363-390	543-585					
PRRPO_ROTPG	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED	65-95	102-129	791-839	973-1002					
PRRPO_ROTSI	RNA-DIR RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	65-95	791-839	975-1002						
PRRPO_SCVLA	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	147-188								
PRRPO_TACV	RNA POLYMERASE	TACAIBE VIRUS	183-204	241-271	1107-1134	1978-2008					
PRRPO_TMGMV	PUTATIVE RNA-DIR RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	230-257	1316-1343	1397-1424						
PRRPP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-133								
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	315-370								
PRRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PRRPP_HRSVI	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PRRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PRRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-370								
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-370								
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-370								
PRRPP_PI1HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CJ3)	84-111	234-261	375-416						
PRRPP_PI1HC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	84-111	234-261	375-416						
PRRPP_PI1HD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	84-111	232-262	375-416						
PRRPP_PI1HE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	84-111	244-271	375-416						
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	167-194	222-256							
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	167-194	222-256							
PRRPP_PI3B	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	34-91	255-282	285-314						
PRRPP_PI3H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	114-144	269-299							
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127								
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANT5)	330-357	379-420							
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	330-357	379-420							
PRRPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	330-357	379-420							
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	330-357	379-420							
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	330-357	379-420							

PCGENE	1892x1782c4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN WJ)	205-232	236-263							
PSODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	72-99								
PSODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	72-99								
PSPHR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	91-118	140-167	227-261	361-390					
PSPI1_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	286-313								
PSPI2_VACCV	SERINE PROTEINASE INHIBITOR 2	VACCINIA VIRUS (STRAIN WR)	59-86								
PSPIA_VACCC	SERINE PROTEASE INH 2 HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-45								
PTC2_CHVP1	TYPE II RESTRICTION ENZYME CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	16-43								
PTAA2_VACCV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS	95-133								
PTAG8_FOWPV	TRANS-ACTIVATOR PROTEIN FP0	FOWLPOX VIRUS	3-31								
PTAG8_VACCV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS	3-30								
PTAG8_VARV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-30								
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-318								
PTALA_POVBO	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	502-537								
PTALA_POVHA	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	587-621								
PTALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	224-258	616-684							
PTALA_POVM3	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	513-540								
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	511-538								
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	508-535								
PTATR_NPVAC	TRANS-ACT TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	407-434	489-523	532-559						
PTATR_NPVBM	TRANS-ACT TRANS REG PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	412-439	494-528	537-564						
PTATR_NPVOP	TRANS-ACT TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	512-554								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1344-1371	1876-1903					
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2229							
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1673-1710							
PTEGU_HSV2G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G5)	102-129	228-262	567-611	962-993	1098-1131	1661-1688	1884-1911		
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1205-1232						
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	524-607	672-700	777-814	846-898	949-986	990-1017	1467-1497	2102-2135	
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	375-413								
PTMAF_AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	302-336								
PTOP1_SFVKA	DNA TOPOISOMERASE I	SHOPE FIBROMA VIRUS (STRAIN KASZA)	38-65	132-176							
PTOP1_VACCV	DNA TOPOISOMERASE I	VACCINIA VIRUS	38-65								
PTOP1_VARV	DNA TOPOISOMERASE I	VARIOLA VIRUS	38-65								
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	902-936								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-143								
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	120-147								
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	542-569						
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586-613								
PUL06_HSVEB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	15-42	302-358	368-402						
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL11_EBV	HYPOTHETICAL PROTEIN BBLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-42								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PUL14_VZVD	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PUL20_HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407								
PUL23_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	204-231	362-389						
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	345-375								
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-143								
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-235								
PUL34_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-139								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								

PCGENE	10/11/1864	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	470-497	853-884							
PULJ1_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	715-749	987-1014							
PULJ1_HSVEB	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	31-45	685-737							
PULJ1_HSVSA	GENE 23 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	107-134	485-512	1118-746	976-1001					
PULJ1_VZVD	GENE 23 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	136-364								
PULJ1_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	331-358								
PULJ2_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	128-154	312-349							
PULJ2_VZVD	GENE 33 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	114-148	448-485	763-790	811-843					
PULJ3_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	488-515								
PULJ3_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	488-515								
PULJ3_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	190-217								
PULJ3_HSVE4	91 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	139-186								
PULJ6_HCMVA	PROTEIN UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	185-213	787-814							
PULJ6_EBV	PROB DNA REPLICATION PROTEIN (SALF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	153-230	943-970							
PULJ6_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	130-157								
PULJ6_HSVSA	PROB DNA REP GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	201-337								
PULJ6_VZVD	PROB DNA REP GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	74-101								
PULJ9_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	85-92								
PULJ9_HCMVA	PROB DNA REP PROTEIN UL76	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-33								
PULJ9_HCMVA	UL76 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-36								
PULJ9_HSVSA	HYPOTHETICAL GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	65-79								
PULJ9_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	409-436								
PULJ7_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	336-363	729-756							
PULJ7_HSVGU	HYPOTHETICAL PROTEIN SR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	583-609								
PULJ7_HSVSA	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	107-144	168-196							
PULJ2_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-122								
PULJ2_HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	286-33	314-341							
PULJ3_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71								
PULJ4_HSVGU	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN UGANDA-1102)	73-100	105-134							
PULJ5_HSVGU	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	4-31	443-477							
PULA1_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-78								
PULB9_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	90-124								
PULD0_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-176								
PUN0_HSVSA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	81-115								
PUN0_SFVKA	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	83-116	139-156							
PUN0_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	83-116	139-156							
PUN0_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	83-116								
PUN0_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	20-47								
PUS09_HCMVA	HYPOTHETICAL PROTEIN HOLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	277-304								
PUS14_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-218								
PUS18_HCMVA	MEMBRANE PROTEIN HWLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	2-29								
PV111_ASFL3	L18 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN 833 / ISOLATE LEIDEN)	702-729								
PV123_AMVLE	123 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	2-29								
PV137_ASFL5	L35 137 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L15/7)	2-29								
PV13K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	59-86								
PV140_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	486-540	945-972							
PV16K_TRVPS	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	59-113								
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	23-54	710-737	840-868						
PV1A_BRMV	1A PROTEIN	BROME MOSAIC VIRUS	22-58	384-411	836-863	892-919					
PV1A_BMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	349-376								
PV1A_CCMV	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-38								
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-38	864-902							
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-38								
PV1A_PSVI	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	4-31	372-399							
PV1A_TAV	1A PROTEIN	TOMATO ASPERMY VIRUS	11-38	271-298	376-403	857-884					
PV35K_NPVAC	35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-31								
PV39K_PEBV	39.8 KD PROTEIN	PEA EARLY BROWNING VIRUS	140-170								
PV39K_TRVSY	39 KD PROTEIN	TOBACCO RATTLE VIRUS	170-197								

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	48-75								
PV2A_BBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	101-328								
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	178-205								
PV2A_CMVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	792-819								
PV2A_PSVJ	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	325-352	717-751							
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	313-340	722-756							
PV30K_HCMVE	30 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-221								
PV30K_TRVTC	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	130-160								
PV33P_ADE41	33 KD PHOSPHOPROTEIN	HUMAN ADENOVIRUS TYPE 41	15-42								
PV362_ASFB7	K'362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	75-102								
PV363_ASFB7	D'363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	3-30	172-199							
PV3A_BMV	3A PROTEIN	BROME MOSAIC VIRUS	11-38								
PV3A_CMVFN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	222-252								
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	217-252								
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	222-253								
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	222-253								
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	25-57								
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/181/66)	29-56								
PV3B_IBVB	3B PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	6-33								
PV50K_BYDVP	50 KD PROTEIN	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	119-146								
PV51K_BWYVF	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	424-451							
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GB1)	113-147	424-451							
PV56K_PLRVI	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I)	124-151	438-472							
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	124-151	438-477							
PV58K_BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-155								
PV70K_PLRVI	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I)	110-140								
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	110-140								
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-134								
PVA06_VACCC	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	157-216	250-277	283-310	314-355					
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	156-215	249-276	282-309	313-354					
PVA06_VARV	PROTEIN A6	VARIOLA VIRUS	157-216	250-277	283-310	314-355					
PVA08_VACCC	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-206								
PVA08_VARV	PROTEIN A8	VARIOLA VIRUS	176-206								
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	60-95								
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	219-283								
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	220-284								
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	440-467								
PVA20_VACCC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-67	330-357							
PVA20_VARV	PROTEIN A20	VARIOLA VIRUS	8-67	330-357							
PVA22_VACCC	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	45-72								
PVA22_VARV	PROTEIN A22	VARIOLA VIRUS	56-83								
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-144								
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	95-144								
PVA28_VACCV	PROTEIN A28	VACCINIA VIRUS (STRAIN WR)	22-49								
PVA28_VARV	PROTEIN A28	VARIOLA VIRUS	22-49								
PVA30_VACCV	PROTEIN A30	VACCINIA VIRUS (STRAIN WR)	12-55								
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PVA31_VARV	PROTEIN A31	VARIOLA VIRUS	88-122								
PVA34_VACCC	PROTEIN A34	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-114								
PVA34_VACCV	PROTEIN A34	VACCINIA VIRUS (STRAIN WR)	87-114								
PVA34_VARV	PROTEIN A34	VARIOLA VIRUS	87-114								
PVA36_VACCV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	120-155								
PVA36_VARV	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	127-154								
PVA38_VACCC	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-81								
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-81								
PVA38_VARV	PROTEIN A38	VARIOLA VIRUS	44-91								
PVA39_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71	155-182							

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109	193-220							
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	145-172								
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	145-172								
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	146-173								
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	143-184								
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	143-184								
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	142-184								
PVA49_VACCC	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	61-91								
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	61-91								
PVA49_VARV	PROTEIN A49	VARIOLA VIRUS	61-91								
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	55-82	126-156	435-462						
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	55-82	126-156	435-462						
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS	22-49								
PVAL3_CLVK	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	79-106								
PVAL3_CLVN	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	79-106								
PVAL3_SLCV	AL3 PROTEIN	SQUASH LEAF CURL VIRUS	101-128								
PVAL3_TYLCV	AL3 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	79-129								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	93-129							
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-129							
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-129							
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-129							
PVAT_CAMVS	APHID TRANSMISSION PROTEIN		22-70	93-130							
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70								
PVAT_CERV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	102-138								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	52-82	103-130							
PVB03_VACCV	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-135								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	92-123	182-211	286-313	324-361					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	92-123	182-211	286-313	324-361					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	89-127	182-211	286-313	324-361					
PVB05_VACCO	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LC16MO)	254-284								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-284								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LISTER)	254-284								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN WR)	254-284								
PVB07_VACCV	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	28-62								
PVB08_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-53								
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-53								
PVB11_VACCC	PROTEIN B11	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-54								
PVB11_VACCV	PROTEIN B11	VACCINIA VIRUS (STRAIN WR)	5-38								
PVB16_COWPX	IL-1 BIND PRO PRECURSOR	COWPOX VIRUS	113-140								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	258-285								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)	258-285								
PVB18_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375								
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375								
PVB18_VARV	PROTEIN B18	VARIOLA VIRUS	337-378								
PVB19_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	182-212								
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	180-210								
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	180-210								
PVB19_VARV	SURFACE ANTIGEN S PRECURSOR	VARIOLA VIRUS	180-210								
PVB20_VACCC	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-82								
PVB21_VACCV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	64-91								
PVBL1_BGMV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	120-147	248-275							
PVBL1_CLVK	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	118-145								
PVBL1_CLVN	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	118-145								
PVBL1_PYMVV	BL1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	120-147								
PVC02_VACCC	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	405-432								
PVC02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN WR)	41-71	405-432							

PCGENE	107s178s4	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVC04_SFVKA	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	209-236	484-515							
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46								
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	12-46								
PVC05_SFVKA	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-125	152-179							
PVC05_VACCC	PROTEIN C5	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-65								
PVC05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	38-65								
PVC05_VARV	PROTEIN C5	VARIOLA VIRUS	36-66								
PVC07_VACCV	PROTEIN C7	VACCINIA VIRUS (STRAIN WR)	80-111								
PVC07_VARV	PROTEIN C7	VARIOLA VIRUS	80-111								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-69	82-116	178-205	252-279	289-325	575-605			
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	42-69	82-116	178-205	252-279	289-323	575-605			
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-163								
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	136-163								
PVC13_SFVKA	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-30	39-66	137-182	206-240					
PVC17_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-152								
PVC18_VACCC	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-74								
PVC19_SFVKA	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	56-97								
PVC20_VACCC	PROTEIN C20/B26	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-99								
PVC22_VARV	PROTEIN C22/B28 HOMOLOG	VARIOLA VIRUS	299-326								
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	136-170	355-382							
PVCAP_HSV8A	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	769-799								
PVCG3_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-165	199-248							
PVCOM_ADE02	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	88-115								
PVCOM_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	87-114								
PVD03_FOWP1	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	6-33	184-211	321-348						
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	240-267	333-360							
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	240-267								
PVD05_VARV	PROTEIN D5	VARIOLA VIRUS	240-267								
PVD09_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-150								
PVD09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	123-150								
PVD09_VARV	PROTEIN D9	VARIOLA VIRUS	123-160								
PVD10_SFVKA	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	18-52								
PVDBP_CERV	DNA-BINDING PROTEIN	CARNATION ETCHED RING VIRUS	2-35								
PVE02_VARV	PROTEIN E2	VARIOLA VIRUS	282-322								
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-116	437-464							
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	89-116	437-464							
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	89-116	367-394	437-464						
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	180-207								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	103-130								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89								
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	25-59								
PVE1_HPV47	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	146-173								
PVE1_HPV57	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	21-48								
PVE26_NPVAC	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-113								
PVE2_CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	5-34								
PVE2_HPV05	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	17-51								
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	157-184	334-361							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	312-342							
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	313-340								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-186								
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	159-193								
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	304-331								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	158-192	327-354							
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	7-34	323-357							
PVE2_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	17-51	148-175	276-303						
PVE2_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	137-184								
PVE2_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	166-193								
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	2-36	309-336							
PVE2_HPV5B	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	17-51								
PVE2_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	120-150								
PVE2_PCPV1	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	267-294	327-361							
PVE4_HPV05	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	202-229								
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	66-93								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE4_HPV31	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	75-102								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	63-97								
PVE4_HPV5B	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	202-229								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	30-60								
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	30-60								
PVE5_HPV33	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	27-54								
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	11-41								
PVE5_PCPV1	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	33-62								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	75-102								
PVE6_HPV31	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	69-96								
PVE6_HPV39	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	71-102								
PVE6_HPV41	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	119-146								
PVE6_HPV45	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	75-102								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	72-99								
PVE6_HPVME	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	71-102								
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	620-647								
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	411-438								
PVENV_DHVII	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61)	318-366								
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	120-147								
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	313-347								
PVF03_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110	185-212							
PVF03_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	71-110	185-212							
PVF05_VACCP	36 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN L-IVP)	33-60								
PVF05_VACCV	36 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN WR)	33-60								
PVF06_VARV	PROTEIN F6	VARIOLA VIRUS	10-44								
PVF11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	274-321								
PVF11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	270-317								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	274-321								
PVF12_VACCC	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-37	113-140	554-581						
PVF12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	10-37	113-140	554-581						
PVF12_VARV	PROTEIN F12	VARIOLA VIRUS	10-37	202-236	554-581						
PVF16_VACCC	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	35-62	152-179							
PVF16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	35-62	152-179							
PVF16_VARV	PROTEIN F16	VARIOLA VIRUS	35-62	149-179							
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	146-173								
PVFUS_ORFNZ	10 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	59-86								
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-64								
PVFUS_VACCV	KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	37-64								
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-252	301-335							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	164-191	240-274							
PVG01_VARV	PROTEIN G1	VARIOLA VIRUS	225-252	301-335							
PVG02_VACCV	ISATIN-B-TSC DEP PROTEIN	VACCINIA VIRUS (STRAIN WR)	96-123								
PVG02_VARV	ISATIN-B-TSC DEP PROTEIN	VARIOLA VIRUS	96-123								

PCGENE	107:178:4	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVG03_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVG05_VACCC	PROTEIN G5	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75	131-161	225-289	355-389					
PVG05_VARV	PROTEIN G5	VARIOLA VIRUS	48-75	124-161	255-289	355-389					
PVG07_HSVII	HYPOTH GENE 7 MEMB PRO	ICTALURID HERPESVIRUS 1	71-98								
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	308-338								
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	271-301								
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	308-338								
PVG12_SPV1R	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	11-45								
PVG17_HSVII	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	177-204								
PVG18_HSVII	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG1_SPV1R	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	260-287								
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS 4	287-314	383-410							
PVG22_HSVII	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	373-400	581-622	668-705	766-824					
PVG24_HSVII	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1	31-58								
PVG28_HSVII	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	253-290	497-528							
PVG2R_AMEPV	HYPOTHETICAL G2R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	33-64	91-118							
PVG2_SPV1R	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	285-326								
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4	146-173	175-205	262-310						
PVG34_HSVII	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1	95-122								
PVG37_HSVII	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG39_HSVII	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	651-678	1088-1115							
PVG3L_AMEPV	HYPOTHETICAL G3L PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	2-29								
PVG3_SPV1R	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	15-49								
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4	18-52	87-148							
PVG45_HSVSA	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165								
PVG46_HSVII	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-169	346-373	897-924	973-1007					
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394								
PVG4R_AMEPV	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	4-31								
PVG4_SPV1R	GENE 4 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	116-146								
PVG51_HSVII	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG52_HSVSA	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74								
PVG56_HSVII	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG5_SPV1R	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	65-92								
PVG5_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	56-83								
PVG63_HSVII	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	550-584								
PVG64_HSVII	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1213-1254								
PVG66_HSVII	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	362-406								
PVG67_HSVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1342-1369								
PVG68_HSVII	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG75_HSVII	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSVII	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVG7_SPV4	GENE 7 PROTEIN	SPIROPLASMA VIRUS 4	14-44								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	1230-1260	2408-2435							
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	399-426		1022-1084	1278-1305					
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	770-797	809-875	1056-1112						
PVGL2_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	643-684	1030-1092							
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	36-63	591-632	978-1040						
PVGL2_CVMUC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	643-684	1030-1092							
PVGL2_CVMUH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	502-543	889-951							

PCGENE	1072a1178s4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGL3_CVPFS	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	69-110	692-733	1072-1145	1353-1389					
PVGL3_CVPMI	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN MILL	69-110	692-733	1069-1145	1353-1389					
PVGL3_CVPPR	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR46	73-107	690-731	1067-1143	1351-1387					
PVGL3_CVPPU	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	69-107	690-731	1067-1143	1351-1387					
PVGL3_CVPRS	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/1)7004 / BRITISH ISOLAT	468-509	845-921	1129-1165						
PVGL3_CVPRM	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	468-509	845-921	1129-1165						
PVGL3_CVPRT	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB7	69-107	690-731	1067-1143	1353-1387					
PVGL3_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGL3_FIPV	E3 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-233	454-481	709-736	1072-1148	1356-1392				
PVGL3_IBV6	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M42)	809-836	876-903	1057-1091						
PVGL3_IBVB	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	808-835	875-902	1056-1090						
PVGL3_IBVD2	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	809-836	876-903	1057-1091						
PVGL3_IBVK	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	808-835	875-902	1056-1090						
PVGL3_IBVM	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	808-835	875-902	1056-1090						
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95-122	631-658							
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-88	397-424	440-467	851-878					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	50-88	397-424	435-462	852-879					
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454								
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	447-474								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	443-470	934-961							
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	616-643							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	443-470	934-961							
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	933-960							
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-120	352-379							
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475							
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PVGLC_HSVIK	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295-322								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295-322								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-65	154-202	216-243	442-469	486-531				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	154-202	216-243	444-471	488-533				
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	154-202	216-243	444-471	488-533				
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	252-293	340-367							
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65	154-203	442-471	488-515					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65	154-202	213-243	488-518					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	154-202	216-243	444-471	488-515				
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	38-65	154-202	213-243	442-471	488-518				
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAINS EDMONSTON AND HALLE)	228-262								
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	231-265								
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	228-262								
PVGLF_MUMP1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	447-486							
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	447-486							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	447-486							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	151-178	426-511							
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	151-178	426-512							
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	151-178	426-512							
PVGLF_NDVH3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	151-178	426-512							
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	151-178	426-512							
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	151-178	426-512							
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	151-178	192-219	426-512						
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	151-178	437-512							
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	151-178	433-512							
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	151-178	426-512							
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B/48)	151-178	426-512							

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	151-178	426-512							
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	36-63	221-262	309-336						
PVGLF_PI1HC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	147-174	210-266							
PVGLF_PI2H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	90-117	141-175	238-266	483-528					
PVGLF_PI2HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	90-117	141-175	238-266	483-528					
PVGLF_PI2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	90-117	141-175	238-266	483-528					
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	459-497						
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	115-182	207-241	457-497						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	224-265	458-485							
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	224-265	458-506							
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	122-149	211-245	480-507						
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	122-149	211-245	480-507						
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	122-149	211-245	480-507						
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	122-149	211-245	480-507						
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	122-149	211-245	480-507						
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	144-185	241-269	459-496						
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	137-171	417-444							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	124-161	193-200	457-484						
PVGLG_BEFV	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-557								
PVGLG_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-123								
PVGLG_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	63-93								
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB5857)	66-107								
PVGLG_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6190)	243-273								
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 8/60)	66-93								
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	271-298								
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
PVGLG_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	489-519								
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	472-499								
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	549-576	619-648							
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-136	270-297							
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-135								
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	62-89	360-403							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	388-415								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-111								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	512-546	914-941	1128-1255						
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	913-950								
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	340-374	504-535	682-709						
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	945-972								
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	73-100	693-720							
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	75-102								
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	75-102								
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	75-102								
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	628-655	1069-1101							
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	69-96								
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	72-110								
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	72-110								
PVGLM_SEOU8	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	513-540	693-720							
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	73-100	513-540	694-721						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	73-100	513-540	694-721						
PVGLN_BEFV	NONSTRUCT GLYCOPRO GNS PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-564								
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	48-82	1145-1179	1184-1211	1505-1532					
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSO	JUNIN ARENAVIRUS	14-41								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSO	LASSA VIRUS (STRAIN GA391)	86-113								
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSO	MOPEIA VIRUS	86-113	316-346							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSO	PICHINDE ARENAVIRUS	334-375								
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS	109-136	315-350							
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN V5)	303-338								

PCGENE	107s178x4	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN VT)	302-337								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN TRVL 11598)	303-338								
PVGNM_CPSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-221								
PVGP8_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSO	EBOLA VIRUS	280-314								
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN MUSOKE)	559-589	619-646							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN POPP)	559-589	619-646							
PVH05_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	132-166								
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	132-166								
PVH05_VARV	PROTEIN H5	VARIOLA VIRUS	64-91	150-184							
PVHEL_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	130-160								
PVHRP_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	241-275								
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	241-275								
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	90-117	153-180							
VI01_VARV	PROTEIN I1	VARIOLA VIRUS	90-117	153-180							
VI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	160-190								
VI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	160-190								
VI03_VARV	PROTEIN I3	VARIOLA VIRUS	160-190								
VI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	290-317	548-575	593-632						
VI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	290-317	548-575	593-632						
VI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	290-317	548-575	593-632						
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288								
VIE2_NPVOP	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	355-385								
VIEN_NPVAC	IE-REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	217-325	343-400							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	62-89								
VIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	2-36								
VIMP_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174								
VIMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-107								
VINT_SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-100								
VJ01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56								
VJ01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56								
VJ01_VARV	PROTEIN J1	VARIOLA VIRUS	22-56								
VL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-383								
VL1_FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-65								
VL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392								
VL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
VL1_HPV33	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-46								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	345-372								
VL1_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46								
VL1_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	45-72								
VL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
VL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	415-442								
VL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-357								
VL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	330-357								
VL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	625-652							
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU	REOVIRUS (TYPE 1 / STRAIN LANG)	290-317								
PVM21_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	625-662								
PVM22_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVM2_REOVJ	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	624-661								
PVM3_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-N	REOVIRUS (TYPE 3 / STRAIN DEARING)	159-186	343-370	456-483	631-690					
PVMA3_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	124-152								
PVMA2_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	124-151								
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	219-246								
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246								
PVMAT_INCJJ	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	151-185								
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	247-274								
PVMAT_PI2HT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	96-123								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMAT_PIJB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PVMAT_PIJH4	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	323-353								
PVME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	175-209								
PVME1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	175-209								
PVME1_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-48	184-218							
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-48	184-218							
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42)	21-48	184-218							
PVME1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	184-218								
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	220-254	273-324							
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	29-56	220-254	273-324						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BDC)	227-254	273-324							
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	220-254	273-324							
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	220-254	273-324							
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	220-254	273-324							
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	26-53	100-127							
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	4-31	78-118							
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328								
PVMT1_DHVI1	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	38-65	237-264							
PVMT8_MYXVL	M-T8 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	163-190								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	465-492								
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	83-113								
PVNCN_PAVBO	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	149-176								
PVNCS_ADVG	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	86-148								
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002)	14-41	279-339	487-517	585-612	780-817	821-848			
PVNCS_MUMIM	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	35-62	262-289							
PVNCS_MUMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	35-62	262-289							
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	236-270								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	35-62								
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-55	169-196	316-346						
PVNS1_EHDV2	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN ALBERTA	411-438								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	171-198								
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-198								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	171-198								
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	171-198								
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	168-195								
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	171-198								
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	171-198								
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-198								
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	171-198								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	171-198								
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	171-198								
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/82)	171-198								
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	171-198								
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	171-198								
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	171-198								
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	171-198								
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	171-198								
PVNS2_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	87-114								
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78								
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	51-78								
PVNS2_INCJJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98								
PVNS3_CVPFS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	9-36								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	9-36								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	6-40								
PVNS7_CVCAE	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-45								

*CGENE	107s178s4	All Viruses (no bacteriophages)								
*ILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
*VNS7_CVFEJ	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	8-42								
*VNS7_CVPFS	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772/	34-61								
*VNS7_CVPPU	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	34-61								
*VNS7_CVPRA	NONSTRUCTURAL PROTEIN 7	PORCINE RESPIRATORY CORONAVIRUS	34-61								
*VNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	8-42								
*VNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	41-75								
*VNSC_PIH4	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-99								
*VNSM_INSV	NONSTRUCTURAL PROTEIN NS-M	IMPATIENS NECROTIC SPOT VIRUS	262-296								
*VNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	57-84								
*VNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS	146-180								
*VNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	331-369								
*VNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	378-405								
*VNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	378-405								
*VNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	378-405								
*VNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	378-405								
*VNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	378-405								
*VNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	378-405								
*VNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	378-405								
*VNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80)	378-405								
*VNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	378-405								
*VNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-405								
*VNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/)	378-405								
*VNUC_IADE2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	378-405								
*VNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	378-405								
*VNUC_IADM2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	378-405								
*VNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	378-405								
*VNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-405								
*VNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	378-405								
*VNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	378-405								
*VNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	378-405								
*VNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	378-405								
*VNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	378-405								
*VNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	378-405								
*VNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-405								
*VNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	378-405								
*VNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-405								
*VNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	378-405								
*VNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	378-405								
*VNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	378-405								
*VNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	378-405								
*VNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	378-405								
*VNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	378-405								
*VNUC_IAHJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	378-405								
*VNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	378-405								
*VNUC_IAHM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	378-405								
*VNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	378-405								
*VNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	378-405								
*VNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	378-405								
*VNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	378-405								
*VNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	378-405								
*VNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	378-405								
*VNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	378-405								
*VNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	378-405								
*VNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	378-405								
*VNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	378-405								
*VNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	378-405								
*VNUC_IAOHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	378-405								

PCGENE	107s178s4	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	378-405								
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-405								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	378-405								
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	378-405								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	378-405								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	378-405								
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	378-405								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	378-405								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	378-405								
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	378-405								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	378-405								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	378-405								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-405								
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	378-405								
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	378-405								
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	378-405								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/1/76)	378-405								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	378-405								
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	378-405								
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	378-405								
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	378-405								
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	378-405								
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	378-405								
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	378-405								
PVNUC_IAZH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	378-405								
PVNUC_IAZH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	378-405								
PVNUC_IAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	378-405								
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	378-405								
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	378-405								
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	378-405								
PVNUC_IAZJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	378-405								
PVNUC_IAZJ2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	378-405								
PVNUC_IAZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	378-405								
PVNUC_IAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	378-405								
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	378-405								
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	378-405								
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	378-405								
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	378-405								
PVNUC_IAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	378-405								
PVNUC_IAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	378-405								
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	378-405								
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	378-405								
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	416-443	451-478						
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	366-407								
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	366-407								
PV001_VACCC	PROTEIN 01	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37	109-138	581-608						
PV001_VARV	PROTEIN 01	VARIOLA VIRUS	7-37	109-138	581-608						
PVOR1_FXMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	1023-1050								
PVOR1_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	996-1023	1527-1561							
PVOR1_PMV	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS	948-978	1481-1532							
PVOR1_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	597-627								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	698-725	1017-1044							
PVOR1_PVXOJ	165 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	698-725	1017-1044							
PVOR1_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	312-342	691-721							
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	7-41								
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-48								
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	6-33	37-64							

PCGENE	107x178x4	All Viruses (no bacteriophages)									
TILE.NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP10_RGDV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS	205-252								
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS	151-181	227-254							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS	53-80								
PVP12_WTV	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS	81-108								
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ)	81-108								
PVP19_AMCV	CORE PROTEIN P19	ARTICHOKE MOTTLED CRINKLE VIRUS	73-100								
PVP19_TBSVC	CORE PROTEIN P19	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	73-100								
PVP23_HSVSA	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN 11)	2-29								
PVP26_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVP26_HSVSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	48-75								
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	277-304	410-437	632-662	907-934					
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	815-846								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	898-925								
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-146								
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	72-103	415-453							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	39-94	523-553							
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	39-94	524-554							
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	70-101	533-567							
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	52-99	128-156	518-545	705-746					
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96								
PVP30_ASFE7	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75)	39-75								
PVP32_ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	39-75								
PVP35_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	83-119								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	80-107	231-258							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	80-107	231-258							
PVP35_NPVAC	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	270-297								
PVP35_NPVBM	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	68-102								
PVP35_VACCV	IMMUNODOM ENV PRO P35	VACCINIA VIRUS (STRAIN WR)	178-205								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	134-161	264-291							
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	263-290								
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	132-159								
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-252								
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-252								
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	214-252								
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	209-243	798-832							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AUSTRAL	798-832								
PVP3_GFLV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS	99-133								
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	39-66	329-384							
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-67	350-377	451-497	619-692					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	205-232	344-372							
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	515-549								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-208	493-522							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	589-619							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	584-622							
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75								
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	48-75								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	48-75								
PVP4B_FOWPV	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	80-110								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	7-37								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	7-37								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	34-61	576-603							
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	34-61	576-603							
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	34-61	576-603							
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	552-622								
		BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	595-629								

PCGENE	107s178s4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	8-35	584-622							
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	595-629								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	112-146	235-269	552-629						
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	5-32								
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	8-35	572-628							
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	8-35	279-306	565-621						
PVP4_ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	112-139	584-629						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	279-306	565-621						
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	8-35	279-306	565-621						
PVP4_ROTHU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	111-138							
PVP4_ROTHX	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	77-104	279-306	577-621					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	8-35	279-306	565-621						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO7)	8-35	572-610							
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13	8-35	573-628							
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	8-35	577-621							
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	8-38	105-135	235-262						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	8-35	572-627							
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	8-35	279-306	590-617						
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	8-35	577-621							
PVP4_ROTPS	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	584-625							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	5-33	115-161	293-320						
PVP4_ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	8-35	572-628							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	8-35	112-146	584-625						
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	8-38	584-622							
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	8-35	589-619							
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	8-35	130-157	584-622						
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	28-62								
PVP5_AHSV4	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	113-183	191-218							
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	53-80	99-126							
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	53-80	92-126							
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	53-80								
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	53-80	89-126							
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	53-80	92-126	148-182						
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	53-80	89-126							
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	31-80	191-218	399-426						
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS	648-675								
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	161-193								
PVP61_MRDV	PROB NONSTRUCT 41.0 KD PRO	MAIZE ROUGH DWARF VIRUS	153-202								
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	36-63								
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	157-189								
PVP64_NPVOP	MAJOR ENV GLYCOPRO PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	45-72								
PVP67_NPVAC	MAJOR ENV GLYCOPRO PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-81								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	157-189								
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	157-189								
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	157-189								
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	161-193								
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	133-172								
PVP6_RDV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS	10-37	354-381							
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	413-440								
PVP75_HSV8A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	929-977							
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-78	370-397							
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	16-43								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	458-485								
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	101-142	240-298							
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	132-159								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	105-132								
PVP8_FOWPV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	211-238								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	29-56	112-143							
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	197-224								
PVP9_WTV	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS	22-49								
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ)	22-49								
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	196-223								
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	127-186	238-265							
PVPRT_ADEM1	ENDOPROTEASE	MOUSE ADENOVIRUS TYPE 1	167-194								
PVPU_HV1A2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	3-31								
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HTLLO AND HXBJ ISOLATES)	5-48								
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	21-48								
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-49								
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	5-48								
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-30								
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33								
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIXD2 ISOLATE)	5-48								
PVPU_HV1J3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	2-29								
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	22-49								
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	5-32								
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33								
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	5-48								
PVPU_HV1S1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49								
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	64-94								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS	1051-1078								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-43								
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV)	114-144								
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	28-55								
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS	9-44								
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-44								
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	2-29								
PVS07_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	91-146	199-236							
PVS07_ROTP5	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	91-146	202-236							
PVS07_ROTS1	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	91-146	199-236							
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NS2/VP9	BOVINE ROTAVIRUS (STRAIN UK)	164-201								
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	164-201	217-251							
PVS09_ROTB4	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-29								
PVS09_ROTBS	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-29								
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-29								
PVS09_ROTGA	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN ADRV)	210-237								
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-29								
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	2-29								
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN B37)	2-29								
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	2-29								
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	2-29								
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-29								
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-29								
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	2-29								
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	2-29								
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-29								
PVS09_ROTP2	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	2-29								
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	2-29								
PVS09_ROTS1	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	125-152								
PVS10_ROTBS	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	113-140								
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	13-40	114-145							
PVS11_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	13-40	114-145							
PVS11_ROTBV	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN VMOU)	31-60								
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)									

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS11_ROTHS	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	13-40	111-145							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	13-40	111-145							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145								
PVS11_ROTRA	MINOR OUTER CAPSID PROTEIN	RABBIT ROTAVIRUS (STRAIN ALABAMA)	118-145								
PVS11_ROTSI	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-146								
PVSH_MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS	9-46								
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	12-41								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	9-41								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-46								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	9-46								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	12-41								
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	9-41								
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	12-41								
PVS11_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	26-63	71-122	127-168	222-259					
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	4-104	130-193							
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	4-52	75-104	112-160						
PVS12_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	350-384								
PVS13_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	289-316								
PVS1S_REOVD	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	90-117								
PVS1S_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	50-77								
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	124-158								
PVT5_SFVKA	PROTEIN T5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	250-277								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	176-203								
PVTER_HSVII	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	710-737								
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	394-421								
PVTPJ_TTVIV	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN VTJ)	169-196								
PVTPX_TTVI	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	169-196								
PVV_PI4HA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PY101_SSVI	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	25-65								
PY108_SSVI	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-61								
PY119_SSVI	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-78								
PY11K_TYDVA	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	53-87								
PY13K_NPVAC	HYPOTH 13.1 KD IN 39 KD 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	85-112								
PY13K_SSVI	HYPOTHETICAL 13.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	59-86								
PY14K_SSVI	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39								
PY16K_NPVAC	HYPOTH IN 39 KD PROTEIN 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	80-107								
PY16K_SSVI	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	77-111								
PY17K_SSVI	HYPOTHETICAL 17.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	9-36	119-153							
PY18K_MSVN	HYPOTHETICAL 17.7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	34-61								
PY18K_MSVS	HYPOTHETICAL 17.2 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	34-61								
PY20K_SSVI	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	76-103								
PY28K_SSVI	HYPOTHETICAL 28.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	93-164								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	118-148								
PY31K_SSVI	HYPOTHETICAL 31.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	24-97								
PY32K_SSVI	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	233-267								
PY38K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-184								
PY3_SOCMV	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-149								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94								
PY85K_SSVI	HYPOTHETICAL 85.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-121	546-573	658-700						
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	13-40								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	74-108	152-179	184-218						
PYB05_FOWPM	HYPOTHETICAL BAMHI-ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	62-89								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-197	214-241							

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	11-38								
PYB13_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	128-167								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	87-116								
PYDH1_HSV87	HYPOTH 24.1 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	161-188								
PYDH1_HSV8C	HYPOTH 28.7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	52-82								
PYDH4_HSV8C	HYPOTH 9.9 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PYF26_FOWP1	HYPOTHETICAL 25.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	8-35								
PYF30_FOWP1	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	170-204								
PYH22_VACCV	HYPOTH 21.7 KD HINDIII-C PRO	VACCINIA VIRUS (STRAIN WR)	37-64	95-126	144-171						
PYH8J_VACCV	HYPOTH HOST RANGE 27.4 KD PRO	VACCINIA VIRUS (STRAIN WR)	31-58	179-206							
PYKR2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYKR4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYL15_ADE41	HYPOTH 12.4 KD IN 33 KD REGION	HUMAN ADENOVIRUS TYPE 41	47-86								
PYLR3_EBV	HYPOTHETICAL BLRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-54								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	94-143								
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	35-76								
PYORJ_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	64-94								
PYORJ_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	65-95								
PYOR5_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS)	92-119								
PYORA_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	23-57								
PYORL_TTV1	HYPOTHETICAL 26.8 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	15-42								
PYORQ_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-31								
PYORW_TTV1	HYPOTHETICAL 12.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	4-40								
PYP12_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	44-71								
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	44-71								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	59-101	106-157							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	51-101	106-157							
PYP46_RTBV	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	58-107	197-231							
PYP46_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	58-107	197-231							
PYP63_NPVAC	HYPOTH PRO P6.5 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-71								
PYP63_NPVOP	HYPOTH 40.0 KD IN P6.5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	325-352								
PYPOH_NPVAC	HYPOTH 23.6 KD IN POLYHEDRIN 5'REGIO	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	116-153								
PYPOL_IPNVN	HYPOTHETICAL 17.0 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	5-32								
PYQ3_AMEPV	HYPOTHETICAL PROTEIN IN TK 3'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS	8-57	59-96	156-183						
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	208-235								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	223-257	268-299							
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	141-168								
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	404-441								
PYRP2_IRV6	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS	10-45								
PYVAG_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-34								
PYVAH_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-112								
PYVDB_VACCC	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-77								
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-77								
PYVDH_VACCV	HYPOTHETICAL 7.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	20-50								
PYVGB_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-44								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	152-179								

TABLE VII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

(PREFERRED VIRAL SEQUENCES)

PCGENE	10x11hd	All Viruses (no bacteriophages)									
ITEM NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	453-460								
PENV_MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	317-344								
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	1005-1012								
PMYC_AVD43	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	332-364	335-401							
PMYC_AVD40	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MH1	331-367	376-401							
PMYC_AVD4C	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	331-367	376-401							
VL1_FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPVL	11-43								
PVGL0_HSV01	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454								
PUL03_HSV01	RIBONUCLEOSIDE-DIPHOSPHATE REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN LA)	90-111								
PVGL0_HSV01	GLYCOPROTEIN E-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN LA)	427-454								
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 06)	13-44	344-401	431-493						
PENV_BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	377-433	660-726						
PENV_BLVAS	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	104-131								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VOM)	104-131								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	104-131								
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB315)	111-131								
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB39)	104-131								
PENV_BLVJ1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	104-131								
PIEMA_PIID	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PFUP_PIIB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	14-91	135-182	185-214						
PVGA1_PIIB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	459-487						
PVGA1_PIIB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PRPP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-133								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-65	135-202	216-243	442-469	486-511				
PVMA3_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	124-152								
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	219-246								
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	134-202	216-243	444-471	488-513				
PVGLG_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-113								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A594)	38-65	134-202	216-243	444-471	488-513				
PENV_BAEVB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	510-539								
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	166-187	233-289	318-364	526-584	637-654				
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	242-269	626-681							
PVE2_CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	5-36								
VL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-381								
PPOL0_DEN3S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1858-1885	2890-2915	2988-3016						
PPOL0_DEN3H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN H241)	1864-1891	2896-2921	2988-3016	2982-3016	3117-3147				
PPOL0_DEN1T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN HAITI/PDK13)	1864-1891	2896-2921	2988-3016	2982-3016	3117-3147				
PPOL0_DENJ1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN JAMAICA)	1864-1891	2896-2921	2988-3016	2982-3016	3117-3147				
PPOL0_DENJP	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN PR159/S1)	1864-1891	2896-2921	2988-3016	2982-3016	3117-3147				
PPOL0_DENTP	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN TONGA 1974)	1864-1891	2896-2921	2988-3016	2982-3016	3117-3147				
PPOL0_DENIT	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2	1854-1881	2886-2911	2978-3006	2972-3006	3107-3137				
PPOL0_DEN2	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2	1858-1885	2890-2915	2982-3010	2976-3010	3111-3141				
PPOL0_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2885-2910	2917-3011	3043-3169	2990-3014	3145-3172				
PDPOL_I91B0B	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE $5)	5-39								
PDPOL_I91BDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL_I91B0W	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE $11)	5-39	104-131							
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1315-1342	1346-1371	1836-1863					
PUL06_EBV	VIRION PROTEIN BSRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	342-369						
PUL11_EBV	HYPOTHETICAL PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	13-43								
PUL33_EBV	PROB DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	185-212	907-934							
PUL17_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	409-436								
PUL91_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	168-196							
PVCA2_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	811-838								
PVGL3_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	93-122	611-638							
PVGLH_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	548-576	619-648							
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP14	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-144								

PCGENE	[87:178:4	All Viruses (no bacteriophages)									
LOCUS_NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	334-390								
PYKR3_EBV	HYPOTHETICAL BKRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYKR4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYLR3_EBV	HYPOTHETICAL BLRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-56								
PYZL3_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	132-179								
PBZLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	55-82								
PLMP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-175								
PLMP3_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	296-321								
PLMP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-175								
PLMP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJI)	148-175								
PUL33_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	145-175								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS35A)	443-470	934-961							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABI)	443-470	934-961							
PATI2_HSVEB	ALPHA TRANS-IND FACTOR 82 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	294-321								
PATIN_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	333-389								
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	321-348							
PRDR1_HSVEB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1203-1232						
PUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL24_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PUL31_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL37_HSVEB	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	715-749	987-1014							
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	193-220	943-970							
PVG03_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
VDMP_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174								
PVP26_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	933-960							
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	312-339								
PUL47_HSVE4	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	190-217								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	616-643							
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	271-298								
PDUT_HSVE4	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PVE3_PAPVE	PROBABLE E3 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	130-150								
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	650-680	722-749							
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-473								
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	639-668	720-747							
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-679	721-748							
PENV_FLVC6	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	509-538								
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420								
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-420								
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519								
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510-539								
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516								
PENV_MLVFS	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE ST)	523-552								
PENV_MLVBF	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	533-561								
PENV_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	533-561								
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203	533-564							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	396-442	669-676							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	533-562	676-703							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								

PCGENE	(82x178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA1	AREA1	AREA1	AREA1	AREA 2
PPOL0_HPAV0	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	2013317	1021-1048	1117-1149	1434-1481					
PPOL0_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	2013317	1021-1048	1117-1149	1434-1481					
PPOL0_HPAV5	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 49C)	2013317	1021-1048	1117-1149	1434-1481					
PPOL0_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	2013317								
PPOL0_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA7G)	1812316								
PPOL0_HPAVI	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	2013317	1021-1048	1103-1149						
PPOL0_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	2013317	1021-1048	1103-1149						
PPOL0_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	2013317	1021-1048	1103-1149						
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PEDW194)	436 483								
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	440 476								
PPOL0_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	2013329								
PPOL0_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	2013329	1045-1073							
PPOL0_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	2013329	1045-1073							
PPOL0_HCVJK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	2013329	1045-1073							
PPOL0_HCVJN	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JN)	2013329	1045-1073							
PPOL0_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	2013329	1045-1073							
PPOL0_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	2013329	1045-1073							
PPOL0_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	2013329	1045-1073							
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111								
PAANT_HDVD1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111								
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111	1061111							
PAANT_HDVS3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111								
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111								
PAANT_HDVT1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111								
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	1061111								
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	2193246	2403276	2603276						
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	2193246	2403276	2603276						
PPOLN_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	2193246	2403276	2603276						
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	2183245	2403315							
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5.19								
PMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	394.538								
PBLF_HSV11	TRANSCRIPTIONAL REGULATOR (ES)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	2183233								
PEAR_HSV11	DNA-BINDING EARLY PROTEIN UL44	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40.67								
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667.694	1611-1110							
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586.613								
PUL10_HSV11	VIRION PROTEIN UL10	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116.143								
PUL33_HSV11	PROTEIN UL33	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	470.497	855.884							
PUL42_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	331.358								
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	448.515								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469.510								
PATD_HSV11	ALPHA TRANS-IND FACTOR 1B KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	398.515								
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	448.515								
PATD_HSV1F	ALPHA TRANS-IND FACTOR 1B KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	398.515								
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469.510								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	471.548								
PTEGU_HSV2G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	667.629	2218.2621	567.611	962.993	1098.1111	1681.1688	1884.1911		
PVGLH_HSV2G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	62.89	160.401							
PTYP1_HSV2G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	208.235								
PTYP2_HSV2G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	233.353	266.299							
PTYP3_HSV2G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	141.188								
PTYP4_HSV2G	HYPOTHETICAL PROTEIN RE4	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	104.441								
PPI00_HSV2G	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	81.106	187.216	688.715	785.812					
PUL27_HSV2U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	536.561	228.268							
PUL55_HSV2U	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	73.100	101.134							
PVCAP_HSV2U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	136.170	355.382							
PVTEG_HSV2U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	178.203								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPES VIRUS ATELES	118.143								

PCGENE	1078117824	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN II)	623-652								
PDUT_HSVSA	DEOXYU 5'-TRIPHOSPH NUCLEOTIDOHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN II)	179-213								
PHELI_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN II)	418-449								
PIC10_HSVSA	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN II)	58-83	482-522							
PIE40_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	68-78								
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN II)	340-386								
PRIR1_HSVSA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN II)	324-351								
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	524-607	672-700	777-814	846-898	949-986	990-1017	1467-1497	2102-2135	
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN II)	120-147								
PUL06_HSVSA	VIRION GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	15-42	302-358	368-402						
PUL25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	34-61	204-231	362-389						
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	208-235								
PUL37_HSVSA	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	31-65	685-737							
PUL52_HSVSA	PROB DNA REP GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	130-157								
PUL73_HSVSA	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	9-36								
PUL87_HSVSA	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	582-609								
PUL92_HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	93-122								
PUNG_HSVSA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN II)	135-176								
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	769-799								
PVG45_HSVSA	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	138-165								
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	360-394								
PVG52_HSVSA	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	47-74								
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN II)	388-415								
VDMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	80-107								
PVP23_HSVSA	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN II)	2-29								
PVP26_HSVSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN II)	48-75								
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN II)	305-332	344-372							
PVP75_HSVSA	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN II)	881-908	929-977							
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	333-368	512-539							
PCGH2_HSVSA	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN II)	127-154								
PYDH1_HSVSJ	HYPOTH 24 1 KD IN DIHFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	167-198								
PYDH1_HSVSC	HYPOTH 26 7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	52-82								
PYDH4_HSVSC	HYPOTH 9 9 KD IN DIHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PENV_MLVHO	ENV POLYPROTEIN	HOMOLOV MURINE LEUKEMIA VIRUS	510-540								
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	757-786								
PIC10_HCMVA	PROB PROC & TRANSPORT PRO UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	304-334								
PIR05_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	22-49								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-102								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	38-62								
PRIR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	622-649								
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1351-1381	2202-2239							
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-107								
PUL20_HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	187-194	254-284							
PUL33_HCMVA	HYPOTHETICAL PROTEIN UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-148	448-485	763-790	802-833					
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-186								
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-101								
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92								
PUL73_HCMVA	UL73 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-33								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	45-70								
PUL93_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-53	314-341							
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71								
PULA4_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-31	443-477							
PUL89_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-78								

PCGENE	(60x178x4	All Viruses (no bacteriophage)									
TITLE NAME	PROTEIN	VIRUS	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1
PUL20_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	96-124								
PUS09_HCMVA	HYPOTHETICAL PROTEIN US09	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-43								
PUS14_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	177-208								
PUS11_HCMVA	MEMBRANE PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-218								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-68	397-424	440-467	811-838					
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-136	370-397							
PVGLI_HCMVA	38 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	67-111								
PVTEA_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	433-464								
PVXRC_HCMVE	90 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-231								
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-68	397-424	440-467	811-838					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-135								
PENV_HV1A3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	164-192	610-682	790-833						
PGAG_HV1A3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	91-118								
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	318-345	620-661							
PVPU_HV1A3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF) ISOLATE)	1-31								
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 AND IIIB10) ISOLATES)	1-48		791-838						
PENV_HV1B1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	545-594	631-681							
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	318-345	631-681							
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	1190-1217	631-681							
PENV_HV1B4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	545-589	626-676	786-833						
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	27-58								
PENV_HV1BN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAZIL ISOLATE)	267-294	338-365	567-590	628-679	787-833				
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAZIL ISOLATE)	27-59								
PENV_HV1BR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	550-599	638-688	796-823						
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	2100-2127	632-673							
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	1-48								
PENV_HV1C4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	197-424	337-606	643-695	803-833					
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	1-30								
PENV_HV1EL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	215-286	386-413	545-591	628-680					
PNEF_HV1EL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-109								
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-244	624-660							
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33								
PENV_HV1H2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	545-594	631-681	791-838						
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	318-345	620-661	921-951						
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	1-48								
PENV_HV1H3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NY5) ISOLATE)	545-594	631-681	791-838						
PENV_HV1J3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NY5) ISOLATE)	550-599	636-686	796-843						
PGAG_HV1J3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NY5) ISOLATE)	91-118								
PVPU_HV1J3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NY5) ISOLATE)	1-39								
PENV_HV1JR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	116-163	632-675	781-811						
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	322-349	624-665							
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	32-59								
PENV_HV1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	547-595	635-707	794-826						
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	317-344	476-510	619-660						
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	1-32								
PENV_HV1NF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	545-592	639-681	789-816						
PENV_HV1ON	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ON ISOLATE)	543-590	567-595	632-664	791-819					
PGAG_HV1ON	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ON ISOLATE)	87-110								
PPOL_HV1ON	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ON ISOLATE)	221-248	623-664							
PENV_HV1ND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	269-300	536-583	631-671	781-813					
PNEF_HV1ND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-110								
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-244	624-660							
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33								
PENV_HV1NS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	328-360								
PPOL_HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	318-345	633-661							
PENV_HV1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	164-193	610-704	789-820						

PCGENE	10?a178a6	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	218-245	620-661							
PENV_HV1PV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	543-594	611-683	791-818						
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	220-257	637-673							
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	5-48								
PENV_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	280-307	351-378	554-602	640-692	800-833				
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	217-244	619-660							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	61-89								
PENV_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	545-593	631-683						
PENV_HV1SI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-361	536-585	622-674	782-809					
PVPU_HV1SI	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49								
PENV_HV1SJ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	541-589	627-679	787-815						
PENV_HV1KB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	274-301	555-596	637-677	776-824					
PPOL_HV1UA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE U	217-244	613-660	619-660						
PENV_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	338-365	545-593	631-683	791-818					
PENV_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	334-361	536-584	622-674	782-809					
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	286-307	573-601	634-678	797-828					
PENV_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z3/CDC-Z34 ISOLATE)	255-296	542-591	628-680	790-820					
PPOL_HV1Z3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z3/CDC-Z34 ISOLATE)	217-244	619-660							
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-282								
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-287	545-593	630-682	792-822					
PNEF_HV1Z6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PENV_HV1ZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	545-594	627-666	791-823						
PENV_HV2BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	532-591	621-648	653-697					
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-582								
PENV_HV2CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	536-593	623-650	655-699						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1?)	471-562								
PENV_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	61-88	523-550	555-582	644-688					
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600								
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	491-568								
PENV_HV2GI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	60-87	524-551	556-583	613-640	645-691				
PPOL_HV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562								
PENV_HV2NZ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	61-88	524-551	556-583	613-640	667-689				
PGAG_HV2NZ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	88-115								
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	491-579								
PENV_HV2RO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	58-85	533-592	622-698						
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-563								
PENV_HV2SB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	553-584	614-673							
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	493-563								
PENV_HV2ST	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	559-586	648-692					
PGAG_HV2ST	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582								
PENV_HV2ST	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24 IC82)	442-476	527-554	559-586	648-682					
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	157-184	334-361							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	81-105	312-342							
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	66-93								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	303-340								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	75-102								
VL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-186								
VL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								

FCGENE	10jul1994	AB Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS							
PVE1_HPV1A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	139-193						
PVE1_HPV1I	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	15-101						
PVE2_HPV1I	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	69-96						
PVE1_HPV1I	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	180-203						
PVE1_HPV1J	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1J	164-331						
PVE2_HPV1J	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1J	19-46						
VL1_HPV1J	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1J	136-192	127-334					
PVE2_HPV1S	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1S	13-54						
PVE2_HPV1S	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1S	160-180						
PVE1_HPV1S	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1S	3-34	133-337					
PVE1_HPV1S	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1S	71-102						
PVE4_HPV1S	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1S	51-89						
PVE1_HPV1I	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	61-97						
PVE4_HPV1I	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	119-146						
PVE1_HPV1I	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	165-372						
VL1_HPV1I	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	415-462						
PVE1_HPV1I	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	33-59						
PVE1_HPV1I	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	75-102						
PVE4_HPV1I	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	106-131						
PVE1_HPV1I	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	131-51	148-175	176-303				
PVE1_HPV1I	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	131-51						
PVE1_HPV1I	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	202-229						
PVE3_HPV1I	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	117-184						
PVE4_HPV1I	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	12-99						
VL1_HPV1I	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1I	19-46						
PVE1_HPV1J	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1J	21-48						
PVE3_HPV1J	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1J	166-193						
PVE1_HPV1K	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1K	2-36	109-336					
VL1_HPV1K	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1K	43-72						
PVE1_HPV1O	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1O	17-51						
PVE1_HPV1O	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1O	202-229						
PVE4_HPV1O	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1O	11-41						
PVE1_HPV1O	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1O	10-60						
PVE1A_HPV6B	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	10-60						
PVE1A_HPV6C	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	134-393						
VL1_HPV6B	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	11-102						
PVE6_HPV4E	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 4E (81)	11-102						
PRUP_PIIVG	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	84-111	234-261	333-416				
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	337-404	415-462					
PRUP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	84-111	234-261	333-416				
PVGLY_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	163-174	210-266					
PRUP_PIIHE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CL-1401)	84-111	234-261	333-416				
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CL-1401)	41-75						
PRUP_PIIHO	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CL-5711)	84-111	232-261	333-416				
PHEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	79-110	166-193					
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	337-404	414-441					
PRUP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS	167-194	232-259					
PVGLY_PIIH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS	90-117	234-266	483-538				
PVGLY_PIIHO	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN GREER)	90-117	234-266	483-538				
PRUP_PIIHT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	322-349	1364-1391	1687-1721	1901-1946			
PRUP_PIIHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	167-194	232-316					
PVGLY_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	90-117	141-175	234-266	483-538			
PVMAT_PIIHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	96-111						
PHEMA_PIIMA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN AUS/1248/1974)	77-81						
PNCAP_PIIM4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NDV M1811)	376-401						
PHEMA_PIIM4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NDV M1811)	77-81						
PRUP_PIIM4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NDV M1811)	322-86	608-638	1081-1123	1994-2030	2115-2143		
PRUP_PIIM4	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NDV M1811)	114-144	165-199					

FCCGENE	16fb170d	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVGLF_MUMV	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	115-183	207-241	457-497						
PVMAT_MUMV	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVNSC_MUMV	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	18-99								
PHEMA_PIHRV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677483)	27-61								
PHEMA_PIHRT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TEX/2415409)	27-76								
PHEMA_PIHRU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9105411)	27-76								
PHEMA_PIHRX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1111/77)	27-61								
PHEMA_PIHRW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/9441/79)	27-61								
PNUP_PIHIA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PVV_PIHIA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PNUP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PNUP_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	101-192	210-237	647-694	788-815	1007-1034	1138-1165	1451-1480	1776-1803	2063-2089
PNUP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	18-45	114-202	211-241	488-518					
PVMAJ_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	126-155								
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246								
PVGLG_HRSVA	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN B1(1))	66-107								
PVGLG_HRSVS	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN B1(86))	203-237								
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN B1(5-2))	18-45	114-202	211-241	442-471	488-518				
PNUP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	18-45	114-202	210-241	442-471	488-515				
PNCAP_HRSVL	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31	74-108	112-141						
PVGLF_HRSVB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	18-45	114-202	442-471	488-515					
PVGLG_HRSVI	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	63-93								
PVGLG_HRSVB	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 1060)	66-96								
PENV_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	143-176								
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	674-713								
PENV_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	143-176								
PENV_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	143-176								
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-713								
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	138-170								
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	128-166	710-737							
PR474_HSVI1	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	491-518								
PVG01_HSVI1	HYPOTH GENE 1 HEAD PRO	ICTALURID HERPESVIRUS 1	91-98								
PVG17_HSVI1	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	117-304								
PVG18_HSVI1	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG33_HSVI1	HYPOTHETICAL GENE 33 PROTEIN	ICTALURID HERPESVIRUS 1	333-400	581-622	664-705	764-824					
PVG34_HSVI1	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1	11-58								
PVG35_HSVI1	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1	235-290	407-538							
PVG36_HSVI1	HYPOTHETICAL GENE 36 PROTEIN	ICTALURID HERPESVIRUS 1	91-132								
PVG37_HSVI1	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG38_HSVI1	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1	431-478	1088-1115							
PVG40_HSVI1	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-168	346-373	897-924	971-1007					
PVG51_HSVI1	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG54_HSVI1	HYPOTHETICAL GENE 54 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG63_HSVI1	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	330-384								
PVG64_HSVI1	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSVI1	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1313-1338								
PVG66_HSVI1	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	1403-1429								
PVG67_HSVI1	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1342-1369								
PVG68_HSVI1	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSVI1	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG73_HSVI1	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSVI1	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVTER_HSVI1	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	716-737								

PCGENE	(07:17:3:4	All Viruses (no bacteriophage)									
TITLE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PHEMA_IAN5W	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/AICHI/2/68))	19-330	331-417							
PHEMA_IAN2C	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/AICHI/68))	331-417								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	(INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77))	1-113								
PVNUC_IAANA	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRUNOR/E49/76))	1-498								
PRVP1_IAANN	RNA-DIRECTED RNA POL SUB P2	(INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60))	1-759								
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	(INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60))	1-113								
PVNUC_IAANN	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60))	1-498								
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79))	24-51	331-417							
PNAM_IABDA	NEURAMINIDASE	(INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/760/78))	47-81								
PVNUC_IABRA	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/BRAZIL/1/78))	1-498								
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77))	181-451								
PRVP1_IABUD	RNA-DIRECTED RNA POL SUB P2	(INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77))	1-759								
PVNUC_IABUD	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77))	1-498								
PVNUC_IACAL	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78))	1-498								
PNAM_IACAO	NEURAMINIDASE	(INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/1))	33-64								
PHEMA_IACAO	HEMAGGLUTININ	(INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/1))	9-36								
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75))	181-451								
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49))	11-38	181-441	484-538						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49))	1-113								
PVNUC_IACKG	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49))	1-498								
PVNS1_IACKU	NONSTRUCTURAL PROTEIN NS1	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/KANSAS/24/))	168-195								
PHEMA_IACKX	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83))	196-426								
PVNUC_IACKP	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83))	1-498								
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83(H5N2)))	196-426								
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85))	119-346	184-441							
PNAM_IACHI	NEURAMINIDASE	(INFLUENZA A VIRUS (STRAIN A/CHILE/1/83))	16-43	50-81							
PRVP1_IACHI	RNA-DIRECTED RNA POL SUB P2	(INFLUENZA A VIRUS (STRAIN A/CHILE/1/83))	1-759								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	(INFLUENZA A VIRUS (STRAIN A/CHILE/1/83))	1-113								
PHEMA_IADAI	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76))	181-451								
PNAM_IADAI	NEURAMINIDASE	(INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76))	31-61								
PVNUC_IADAI	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76))	1-498								
PHEMA_IADAJ	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76))	39-56	418-478							
PVNS1_IADAJ	NONSTRUCTURAL PROTEIN NS1	(INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76))	631-653	699-743							
PHEMA_IADAJ	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76))	1-198								
PVNUC_IADAU	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/76/60))	1-498								
PVNUC_IADBE	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/79))	1-498								
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56))	181-451								
PVNUC_IADCZ	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56))	1-498								
PVNUC_IADE1	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1))	1-498								
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56))	11-55	401-453	506-533						
PVNUC_IADE3	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62))	1-498								
PNAM_IADGE	NEURAMINIDASE	(INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49))	31-62								
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1043))	181-451								
PHEMA_IADH8	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/41))	181-451								
PHEMA_IADH9	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/80))	181-451								
PHEMA_IADHI	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/81))	181-451								
PHEMA_IADHJ	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/80))	181-451								
PHEMA_IADHK	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/80))	119-146								
PRVP1_IADHO	RNA-DIRECTED RNA POL SUB P2	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/80))	1-759								
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/80))	181-451								
PVNUC_IADHK	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/77))	1-498								
PHEMA_IADIR	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/81))	181-451								
PHEMA_IADMA	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/MALAYSIA/01/))	11-38								
PVNUC_IADMA	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/MALAYSIA/01/))	1-498								
PHEMA_IADMU	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76))	11-38								
PHEMA_IADMU	HEMAGGLUTININ PRECURSOR	(INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76))	181-451								
PVNUC_IADMU	NUCLEOPROTEIN	(INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76))	1-498								

PCGENE	107:178:6	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-55								
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/11/76)	381-451								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/11/76)	378-405								
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-55								
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	387-453								
PVNUC_IADU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	378-405								
PVNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1955)	378-405								
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77)	40-67	387-453							
PHEMA_IAEN8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/69)	24-51								
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	386-452								
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	29-56	194-221	388-457						
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/77)	29-56	194-221	388-457						
PNRAM_IAHC0	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74)	197-224	386-413							
PHEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-56	194-221	388-457						
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	386-452								
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	378-405								
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	96-76	164-400						
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	386-452								
PHEMA_IAHK8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	386-452								
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/86)	29-56	194-221	388-457						
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	29-56	194-221	388-457						
PRRP2_IAHLO	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	119-146								
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	378-405								
PHEMA_IAHMI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	386-452								
PVNUC_IAHMI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	378-405								
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-56	194-221	388-457						
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/76)	386-452								
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	29-56	194-221	388-457						
PRRP3_IAHPR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	311-361	480-507							
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	378-405								
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	386-452								
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	386-452								
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-56	194-221	388-457						
PHEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	386-452								
PRRP2_IAHTE	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	119-146								
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	378-405								
PHEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	386-455								
PHEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	386-452								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	191-198								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	378-405								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	191-198								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	378-405								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	378-405								
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	197-221	384-442							
PRRP2_IAFPR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	378-405								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PHEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	381-451								
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-405								
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/223/84)	504-531								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/223/84)	378-405								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	378-405								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	378-405								
PVNUC_IAGUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	378-405								
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	501-532								
PRRP2_IAGU2	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	119-146								

FCGENE	IDENTIFIER	AB Viruses (no bacteriophages)		AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS									
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLMAN/LANDY/77)		178-405							
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLMAN/SACRAMENTO/1/49)		178-405							
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLMAN/MINNESOTA/49/66)		178-405							
PHEMA_IAHAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HABANA/1/81)		19-56							
PVNUC_IAHBC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/1/40)		178-405							
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)		178-405							
PVNUC_IAHO3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/83)		178-405							
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)		196-331							
PHEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/1/79)		19-56	435-438						
PHAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/1/79)		50-81							
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/1/79)		178-405							
PRUP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/1/68)		555-607							
PRUP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/1/68)		119-146							
PRUP1_IALE1	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)		119-146							
PRUP1_IALE1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)		119-146							
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)		131-198							
PHEMA_IALEE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LEE/40)		180-456							
PHAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)		50-81							
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)		178-405							
PVNS1_IAMAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)		131-198							
PHEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)		180-456							
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)		178-405							
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)		181-453							
PRUP1_IAMAN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)		119-146							
PVNUC_IAMAO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)		178-405							
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)		181-453							
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H3N2))		181-453							
PHAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H3N2))		50-81							
PHEMA_IAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)		181-453							
PHEMA_IAMES	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)		181-437							
PHEMA_IAMON	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)		181-441							
PVNUC_IAMON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)		178-405							
PVNUC_IANEW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/76/78)		178-405							
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)		181-453							
PRUP1_IANT6	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)		119-146							
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)		178-405							
PVNUC_IAOHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/01)		178-405							
PNAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)		10-81	10-81						
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)		178-405							
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/ANIMEI/3/84)		183-456							
PRUP1_IAPR8	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)		119-146							
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)		131-198							
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)		19-56	435-438						
PNAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)		10-81							
PRUP1_IAPUE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)		119-146							
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)		178-405							
PHEMA_IAQUI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/7/70)		24-51							
PRUP1_IARUD	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)		119-146							
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)		178-405							
PNAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/60/85)		49-81							
PVNUC_IARUS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)		178-405							
PHEMA_IASE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)		181-451							
PHEMA_IASW1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/NETHERLANDS/1/80)		181-451	106-147						
PVNUC_IASW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/NETHERLANDS/1/80)		178-405							
PRUP1_IASIN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)		119-146							

BAD ORIGINAL

FCGENE	All Viruses (no bacteriophage)									
TITLE	VIRUS									
PVNUC_IAAN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/57)	378-405								
PHEMA_IAATA	INFLUENZA A VIRUS (STRAIN A/TAILING/VICTORIA/3/1963)	119-146	181-433							
PVNUC_IAAJ9	INFLUENZA A VIRUS (STRAIN A/SWINE/1977)	378-405								
PVNUC_IAAJ1	INFLUENZA A VIRUS (STRAIN A/SWINE/1/40)	378-405								
PVNUC_IAACA	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	378-405								
PHEMA_IAACO	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	40-67	181-433							
PVNUC_IAADA	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/1/81)	378-405								
PVNUC_IAAGE	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	378-405								
PHEMA_IAAHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/10/81)	331-417							
PRIN1_IAAHJ	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/10/81)	331-417							
PVNUC_IAAHJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/10/81)	119-146							
PVNUC_IAAHJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/10/81)	378-405							
PVNUC_IAAHJ5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/10/81)	378-405							
PHEMA_IAAHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/10/81)	331-417							
PHEMA_IAAIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1/1926)	418-478	506-547						
PRIN1_IAAIN	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1/1926)	331-417							
PVNUC_IAAIO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119-146							
PVNUC_IAAIP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	378-405							
PVNUC_IAAIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976)	378-405							
PVNUC_IAAJ2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/119/83)	378-405							
PVNUC_IAAJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1/46)	378-405							
PVNUC_IAAJ7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1/1981)	378-405							
PVNUC_IAAJ8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1979)	378-405							
PVNUC_IAAJ9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1976)	378-405							
PVNUC_IAAJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1979)	378-405							
PVNUC_IAAJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/1)	378-405							
PVNUC_IAAJE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/1/85)	378-405							
PHEMA_IAJN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	418-478	506-547						
PVNUC_IAJOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/1/81)	378-405							
PVNUC_IAJON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/1/81)	378-405							
PRIN1_IAJTE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/77)	331-417							
PVNUC_IAJTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/77)	378-405							
PRIN1_IAJTF	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/77)	119-146							
PHEMA_IAJUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKKEL/1/84)	331-417							
PVNUC_IAJW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	378-405							
PVNUC_IAJW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	378-405							
PVNUC_IAITJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	19-56							
PVNUC_IAITU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/7/80)	378-405							
PHEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	21-53							
PNAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	49-81							
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	378-405							
PVN31_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1/73)	171-198							
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1/73)	378-405							
PVNUC_IATX1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	378-405							
PVN31_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM GLILIT/1492-B/82)	171-198							
PVN31_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	171-198							
PHEMA_IATKJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	418-478							
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1/81)	378-405							
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	331-411							
PRIN1_IATKM	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	119-146							
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/1964)	418-478							
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	331-378							
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	378-405							
PVN31_IATKA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	37-63	181-433						
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	97-116							
PHEMA_IAUTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1966)	418-478	506-536						
		INFLUENZA A VIRUS (STRAIN A/WYOMING/3/03)	40-67	181-433						

PCGENE	1078x1784	All Viruses (no bacteriophage)										
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	171-198									
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-405									
PHEMA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	29-56	425-478								
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-81									
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	171-198									
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	378-405									
PHEMA_IAVIT	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	61-68	388-454								
PRRP3_IAVIT	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	139-146	337-354								
PVNUC_IAVIA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/85)	378-405									
PNRAM_IAWI84	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WAILE/MAINE/1/84)	49-80									
PVNUC_IAWIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WAILE/MAINE/328/84)	378-405									
PVNUC_IAWIP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WAILE/PACIFIC OCEAN/1976)	378-405									
PHEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	424-477									
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	16-43									
PRRP3_IAWIL	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	139-146									
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	378-405									
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/1523/88)	378-405									
PHEMA_IAXIA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XIANFENG/1/57)	29-56									
PRRP1_INBAC	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	657-194									
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	2-33	472-509								
PRRP1_INBAD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE)	164-194									
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE)	2-33	472-509								
PHEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	400-431	439-483								
PHEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/43)	390-421	439-473								
PHEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	398-429	437-481								
PHEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	391-418	439-473								
PHEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	399-430	438-482								
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	6-35									
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78									
PHEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	389-420	428-472								
PHEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	393-424	432-476								
PHEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	398-429	437-481								
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	171-198									
PHEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	398-429	437-481								
PRRP3_INBSI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	157-194									
PHEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	391-422	430-474								
PHEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	400-431	439-483								
PHEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/1/85)	393-424	432-476								
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	51-78									
PRRP3_INCBE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	509-536									
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	495-521									
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	416-443	451-478							
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	483-559									
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	483-559									
PHEMA_INCHY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	482-558									
PRRP3_INCJJ	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	509-536									
PVMAT_INCJJ	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	151-185									
PVNS2_INCJJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98									
PHEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	496-572									
PHEMA_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	482-558									
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	482-558									
PHEMA_INCNA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/NARA/82)	482-558									
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	483-559									
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	483-559									
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	483-559									
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1333/47)	483-559									
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	483-559									

GCGENE	INITIATED	All Viruses (no bacteriophages)								
TYPENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PENV_MLVBJ	ENV POLYPROTEIN	EDSTEIN MURINE LEUKEMIA VIRUS	90-81							
PVGLB_HSVMO	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-130	332-379						
PENV_MCFF	ENV POLYPROTEIN	MONK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	470-512							
PENV_MCFFJ	ENV POLYPROTEIN	MONK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CF-1)	488-535							
PENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	507-543							
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	534-611							
PVCIB_MCMVS	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	661-691							
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	111-408	441-473						
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	281-288							
PVE2_PCPVI	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	287-304	327-361						
PVE1_PCPVI	PROBABLE E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	33-67							
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538							
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-747	805-837						
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217						
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COL BURN)	435-462	512-539						
PPOL0_IDAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	201-241	1015-1053	1115-1159					
PPOL0_IDAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	201-237							
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	288-316	381-385	592-619	632-670	691-724			
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	541-554	637-671					
PENV_SIVAO	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	45-72							
PPOL_SIVAO	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	230-301	366-397	597-624	658-685	701-730			
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	416-463	482-516	642-669					
PENV_SIVS4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	31-98							
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TANTALUS ISOLATE)	281-308	351-412	642-669	691-718				
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TANTALUS ISOLATE)	88-115							
PENV_SIVAJ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRI-1)	496-523							
PGAG_SIVAJ	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRI-1)	253-291	326-372	548-603	614-708				
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRI-1)	111-567							
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRI-1)	96-137							
VIF_SIVAJ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRI-1)	438-515							
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	3-76							
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	8-35	138-181	589-650	784-816				
PENV_SIVGR	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	333-354	638-830						
PGAG_SIVGR	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	533-608							
PPOL_SIVGR	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	88-115							
PENV_SIVML	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	533-560							
PENV_SIVMI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE/MI/81 ISOLATE)	548-608							
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE/MI/81 ISOLATE)	120-158	550-609	671-715					
PENV_SIVMG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE/MI/81 ISOLATE)	533-560							
PENV_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/SC1 ISOLATE)	136-115	277-289						
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/SC1 ISOLATE)	286-313	554-595	646-722					
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/SC1 ISOLATE)	88-115							
PGAG_SIVMS5	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	496-536							
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	88-115							
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	3-30	268-298	590-617	651-678				
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	637-691							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68							
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	422-470							
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	514-612	650-697						
PEXON_VZVD	ALKALINE EXONUCLEASE	SIMIAN MASON-PFIZER VIRUS (SPAAV)	222-260							
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-139							
PUDR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728						
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146							
PUL14_VZVD	HYPOTHETICAL GENE 48 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609						
PUL31_VZVD	GENE 31 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101							
			330-407							

PCGENE		All Viruses (no bacteriophage etc)									
ID_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PU34_VZVD	VIRION GENE 31 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-119								
PU31_VZVD	GENE 31 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	493-512	119-744	976-1003						
PU41_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-114								
PU41_VZVD	GENE 31 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	110-164								
PU41_VZVD	PROB DNA REP GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-156	112-149							
PU31_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	101-111								
PVGLC_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	193-223								
PVP40_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-204	493-512							
PVTER_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	191-411								
PVGLC_VZVS	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	191-222								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 19	215-236								
PDPOL_WHV19	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	190-211								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	190-211							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	214-236							
PDPOL_WHVB	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	190-211							

TABLE VIII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL PROCARYOTIC PROTEINS

PCGENE	107x178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
P120K_RICRI	120 KD SURFACE-EXPOSED PROTEIN	RICKETTSIA RICKETTSII	83-110	240-298	355-382	638-672	746-838	1168-1202			
P17K_RICTY	17 KD ANTIGEN PRECURSOR	RICKETTSIA TYPHI	67-94								
P190K_RICRI	190 KD ANTIGEN PRECURSOR (CELL SURFACE)	RICKETTSIA RICKETTSII	241-268	460-487	607-634	754-781	829-856	904-931	1220-1254	1544-1571	1723-1750
			2065-2096	2131-2168							
P22KD_DESMO	22.6 KD PROTEIN	DESULFUROCOCCUS MOBILIS	25-52	59-89	120-147						
P40KD_VIBAN	40 KD PROTEIN PRECURSOR	VIBRIO ANGUILLARUM	153-196								
P60IM_ECOLI	60 KD INNER-MEMBRANE PROTEIN	ESCHERICHIA COLI	511-538								
P60IM_PROMI	60 KD INNER-MEMBRANE PROTEIN	PROTEUS MIRABILIS	14-41								
P65KD_ZYMMO	65 KD PROTEIN	ZYMOMONAS MOBILIS	95-122	444-524							
P6PGD_BACSU	PROB 6-PHOSPHOGLUCONATE DEHYDROGENASE	BACILLUS SUBTILIS	24-51	218-246							
P6PGD_ECOLI	6-PHOSPHOGLUCONATE DEHYDROGENASE	ESCHERICHIA COLI	205-232								
P6PGD_SALTY	6-PHOSPHOGLUCONATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	205-232								
PAACA_STAAU	6'-AMINOGLYCOSIDE N-ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	450-477								
PAAT_BACSP	ASPARTATE AMINOTRANSFERASE	BACILLUS SP	146-173	185-212							
PAAT_ECOLI	ASPARTATE AMINOTRANSFERASE	ESCHERICHIA COLI	351-378								
PABC_ECOLI	ABC PROTEIN	ESCHERICHIA COLI	176-203								
PABIC_LACLA	ABORTIVE PHAGE RESISTANCE PROTEIN ABIC	LACTOCOCCUS LACTIS	85-126	170-204	209-273						
PACCR_AGRTU	TRANSCRIPTIONAL REPRESSOR ACCR	AGROBACTERIUM TUMEFACIENS	127-154								
PACEA_ECOLI	ISOCITRATE LYASE	ESCHERICHIA COLI	398-432								
PACON_BACSU	ACONITATE HYDRATASE	BACILLUS SUBTILIS	48-75								
PACON_ECOLI	ACONITATE HYDRATASE	ESCHERICHIA COLI	41-68	613-640							
PACOR_ALCEU	ACETOIN CATABOLISM REG PRO	ALCALIGENES EUTROPHUS	85-112								
PACP_ECOLI	ACYL CARRIER PROTEIN	ESCHERICHIA COLI	4-31								
PACRA_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN A PRECURSOR	ESCHERICHIA COLI	213-247								
PACRB_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN B	ESCHERICHIA COLI	520-551								
PACRF_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN F	ESCHERICHIA COLI	512-550	726-753							
PACTJ_STRCO	PUTATIVE KETOACYL REDUCTASE	STREPTOMYCES COELICOLOR	157-184								
PACTA_LISMO	ACTIN-ASSEMBLY INDUCING PROTEIN PRECURSOR	LISTERIA MONOCYTOGENES	237-264	576-603							
PACVS_NOCLA	ACV SYNTHETASE	NOCARDIA LACTAMDURANS	3129-3163								
PADAA_BACSU	METPHOSTRIESTER-DNA ALKYLTRANSFERASE	BACILLUS SUBTILIS	136-170								
PADDA_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT A	BACILLUS SUBTILIS	398-425	454-481	522-556	1005-1032					
PADDB_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT B	BACILLUS SUBTILIS	257-284	870-903	943-977						
PADH1_CLOAB	NADPH-DEPENDENT BUTANOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	284-311								
PADHA_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE A	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHB_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE B	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHE_CLOAB	ALCOHOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	653-680	779-806							
PADHE_ECOLI	ALCOHOL DEHYDROGENASE	ESCHERICHIA COLI	271-298								
PADIY_ECOLI	PUTATIVE REGULATORY PROTEIN ADIY	ESCHERICHIA COLI	45-72								
PADPI_MYCGE	140 KD ADHESIN PRECURSOR	MYCOPLASMA GENITALIUM	90-131	697-724	923-950	990-1017	1169-1199	1387-1414			
PADPI_MYCPN	ADHESIN P1 PRECURSOR	MYCOPLASMA PNEUMONIAE	1557-1584								
PADT_RICPR	ADP,ATP CARRIER PROTEIN	RICKETTSIA PROWAZEKII	276-307								
PAERA_AERHY	AEROLYSIN PRECURSOR	AEROMONAS HYDROPHILA	278-305								
PAGAL_STRMU	ALPHA-GALACTOSIDASE	STREPTOCOCCUS MUTANS	419-483	597-633							
PAGAR_PSEAT	BETA-AGARASE PRECURSOR	PSEUDOMONAS ATLANTICA	26-53								
PAGR_STAAU	ACCESSORY GENE REGULATOR PROTEIN	STAPHYLOCOCCUS AUREUS	129-159	165-192							
PAIL_YEREN	ATTACH INVAS LOCUS PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	19-46								
PAK1H_ECOLI	ASPARTOKINASE I	ESCHERICHIA COLI	3-30	466-493	503-530						
PAK3H_ECOLI	ASPARTOKINASE II	ESCHERICHIA COLI	51-78	608-635							
PAKB_BACSU	ASPARTATE KINASE II ALPHA AND BETA SUBUNITS	BACILLUS SUBTILIS	266-312								
PAKAB_CORGL	ASPARTATE KINASE ALPHA AND BETA SUBUNITS	CORYNEBACTERIUM GLUTAMICUM	5-32								
PALF_ECOLI	FRUCTOSE-BISPHOSPHATE ALDOLASE	ESCHERICHIA COLI	286-316								
PALGB_PSEAE	ALGINATE BIOSYN TRANSL REG PROTEIN ALGB	PSEUDOMONAS AERUGINOSA	160-194								
PALGE_PSEAE	ALGINATE PRODUCTION PROTEIN ALGE PRECURSO	PSEUDOMONAS AERUGINOSA	349-376								
PALGP_PSEAE	TRANSCRIPTIONAL REGULATORY PROTEIN ALGP	PSEUDOMONAS AERUGINOSA	81-115								
PALKB_PSEOL	ALKANE-1 MONOOXYGENASE	PSEUDOMONAS OLEOVORANS	115-142								
PALKT_PSEOL	RUBREDOXIN-NAD(+) REDUCTASE	PSEUDOMONAS OLEOVORANS	138-172	338-365							
PALR3_ECOLI	ALANINE RACEMASE, CATABOLIC PRECURSOR	ESCHERICHIA COLI	9-36								

PCGENE	10:11:94	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PALA_BACST	ALANINE RACEMASE	BACILLUS STEAROTHERMOPHILLUS	126-193								
PALR_BACSU	ALS OPERON REGULATORY PROTEIN	BACILLUS SUBTILIS	119-146								
PALY3_BACSP	AUTOLYSIN PRECURSOR	BACILLUS SP	137-187								
PALY3_BACSU	AUTOLYSIN PRECURSOR	BACILLUS SUBTILIS	147-191								
PALY3_STAAU	AUTOLYSIN	STAPHYLOCOCCUS AUREUS	244-291								
PAMA_STRPN	AMIA PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	233-264	2997-338	446-493						
PAMD_PSEFL	AMIDASE	PSEUDOMONAS CHLORORAPHIS	72-99								
PAME_STRPN	OLIGOPEPTIDE TRANSPORT PROTEIN AMIE	STREPTOCOCCUS PNEUMONIAE	187-214								
PAMPA_ECOLI	AMINOPEPTIDASE AA	ESCHERICHIA COLI	111-138	199-226							
PAMPC_SERMA	BETA-LACTAMASE PRECURSOR	SERRATIA MARCESCENS	231-258								
PAMPL_BOVR	CYTOSOL AMINOPEPTIDASE	ACHETTSIA PROWAZEKII	3-47	72-99							
PAMPN_ECOLI	AMINOPEPTIDASE N	ESCHERICHIA COLI	635-682								
PAMPP_ECOLI	X-PRO AMINOPEPTIDASE	ESCHERICHIA COLI	110-137								
PAMPT_THEAQ	AMINOPEPTIDASE T	THERMUS AQUATICUS	281-308								
PAMY1_DICTH	ALPHA-AMYLASE 1	DICTYOGLOMUS THERMOPHILLUM	507-534								
PAMY2_DICTH	ALPHA-AMYLASE 2	DICTYOGLOMUS THERMOPHILLUM	131-178	507-534							
PAMY2_SALTY	CYTOPLASMIC ALPHA-AMYLASE	SALMONELLA TYPHIMURIUM	70-104								
PAMY3_DICTH	ALPHA-AMYLASE 3	DICTYOGLOMUS THERMOPHILLUM	280-307								
PAMYB_BACCI	BETA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	61-88								
PAMYB_BACPO	BETA-AMYLASE	BACILLUS POLYMYXA	60-87	266-293	1143-1184						
PAMYB_CLOTU	BETA-AMYLASE, THERMOPHILIC PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	269-296	378-405	459-486						
PAMYO_CLOSP	GLUCOAMYLASE PRECURSOR	CLOSTRIDIUM SP	103-148	480-510							
PAMYM_BACST	MALTOGENIC ALPHA-AMYLASE PRECURSOR	BACILLUS STEAROTHERMOPHILUS	428-453								
PAMYR_BACSI	RAW-STARCH-DIGESTING AMYLASE	BACILLUS SP	210-237	435-465	615-642						
PAMY_AERHY	ALPHA-AMYLASE PRECURSOR	AEROMONAS HYDROPHILA	415-453								
PAMY_ALTHA	ALPHA-AMYLASE PRECURSOR	ALTEROMONAS HALOPLANKTIS	166-193								
PAMY_BACAM	ALPHA-AMYLASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	102-136								
PAMY_BACCI	ALPHA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	212-239	417-474							
PAMY_BACME	ALPHA-AMYLASE PRECURSOR	BACILLUS MEGATERIUM	61-88	441-482							
PAMY_BACSU	ALPHA-AMYLASE PRECURSOR	BACILLUS SUBTILIS	185-305	281-308							
PAMY_BUTFI	ALPHA-AMYLASE PRECURSOR	BUTYRIVIBRIO FIBRISOLVENS	377-418	546-573	579-606	795-822					
PAMY_CLOAB	PUTATIVE ALPHA-AMYLASE	CLOSTRIDIUM ACETOBUTYLICUM	283-310								
PAMY_CLOTU	ALPHA-AMYLASE PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	431-468	612-642							
PAMY_STRLM	ALPHA-AMYLASE PRECURSOR	STREPTOMYCES LIMOSUS	173-200								
PANFA_AZOVI	NITROGEN FIXATION PROTEIN ANFA	AZOTOBACTER VINELANDII	212-239								
PANFD_AZOVI	NITROGENASE IRON-IRON PROTEIN ALPHA CHAIN	AZOTOBACTER VINELANDII	95-122								
PANFK_AZOVI	NITROGENASE IRON-IRON PROTEIN BETA CHAIN	AZOTOBACTER VINELANDII	369-396								
PANGR_VIBAN	ANGR PROTEIN	VIBRIO ANGUILLARUM	93-120	169-203							
PAPCE_FREDI	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	51-78								
PAPCE_SYNPX	PHYCOBILISOME LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	37-64	585-615							
PAPCE_SYNY4	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	SYNECHOCYSTIS SP	52-79								
PAPHC_SALTY	ALKYL HYDROPEROXIDE REDUCTASE C22 PROTEIN	SALMONELLA TYPHIMURIUM	62-89								
PAP1_ACHLY	PROTEASE I PRECURSOR	ACHROMOBACTER LYTICUS	478-505								
PAPC_ECOLI	PROBABLE CYTOCHROME OXIDASE SUBUNIT I	ESCHERICHIA COLI	118-148								
PAPD_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APD	PSEUDOMONAS AERUGINOSA	416-450								
PAPE_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APE	PSEUDOMONAS AERUGINOSA	133-193	208-235	247-277						
PAPT_ECOLI	ADENINE PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	121-148								
PAPU_THEET	ALPHA-AMYLASE-PULLULANASE PRECURSOR	THERMOANAEROBACTER ETHANOLICUS	276-303	347-374	916-982	987-1014	1210-1234	1381-1408			
PARCA_MYCAR	ARGININE DEIMINASE	MYCOPLASMA ARGININI	60-87	218-245							
PARCB_ECOLI	AEROBIC RESPIRATION CONTROL PROTEIN ARCB	ESCHERICHIA COLI	102-150	302-329	399-426						
PARCD_PSEAE	PROBABLE ARGININE/ORNITHINE ANTIPORTER	PSEUDOMONAS AERUGINOSA	274-301	386-420							
PARGA_ECOLI	AMINO-ACID ACETYLTRANSFERASE	ESCHERICHIA COLI	82-109								
PARGT_ECOLI	LYS-ARG-ORN-BINDING PROTEIN (LAO) PRECURSO	ESCHERICHIA COLI	84-111								
PAROA_STAAU	PHOSPHOSERINE/PHOSPHOHYDROXYTHREONINE TRANSFER	STAPHYLOCOCCUS AUREUS	86-120								
PAROC_ECOLI	CHORISMATE SYNTHASE	ESCHERICHIA COLI	68-95								
PAROC_SALTI	CHORISMATE SYNTHASE	SALMONELLA TYPHI	68-95								
PAROD_BACSU	DEHYDROQUINATE DEHYDRATASE	BACILLUS SUBTILIS	49-76								

PGENE	07n17Bd	Prokaryotic Sequenc								
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PAROK_ECOLI	SHIKIMATE KINASE I	ESCHERICHIA COLI	84-118							
PAJIN_STRPY	IGA RECEPTOR PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	127-157	266-324					
PAJP_ECOLI	AJP PROTEIN	ESCHERICHIA COLI	235-282							
PAJA_ECOLI	ARSENICAL PUMP-DRIVING ATPASE	ESCHERICHIA COLI	201-238							
PAJB_ECOLI	ARSENICAL PUMP MEMBRANE PROTEIN	ESCHERICHIA COLI	291-318							
PAJB_STAAU	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS AUREUS	27-71	295-322						
PAJB_STAXY	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS XYLOSUS	27-71	295-322						
PAJR_STAAU	ARSENICAL RESIST OPERON REPRESSOR PROTEIN	STAPHYLOCOCCUS AUREUS	56-93							
PARTA_ECOLI	ARTA PROTEIN	ESCHERICHIA COLI	3-30							
PARTI_ECOLI	TRANSPORT SYSTEM PROTEIN ARTI	ESCHERICHIA COLI	105-132	213-240						
PARTP_ECOLI	TRANSPORT SYSTEM PROTEIN ARTP	ESCHERICHIA COLI	176-206							
PASAI_ENTFA	AGGREGATION SUBSTANCE PRECURSOR	ENTEROCOCCUS FAECALIS	193-234	478-503	799-826	859-896				
PASNA_ECOLI	ASPARTATE--AMMONIA LIGASE	ESCHERICHIA COLI	127-158							
PASND_ECOLI	ASPARAGINE SYNTHETASE D	ESCHERICHIA COLI	340-377							
PASNC_ECOLI	REGULATORY PROTEIN ASNC	ESCHERICHIA COLI	116-141							
PASPA_BACSU	ASPARTATE AMMONIA-LYASE	BACILLUS SUBTILIS	2-34							
PASPA_ECOLI	ASPARTATE AMMONIA-LYASE	ESCHERICHIA COLI	204-236							
PASPA_SERMA	ASPARTATE AMMONIA-LYASE	SERRATIA MARCESCENS	204-231							
PASPG_BACLI	L-ASPARAGINASE	BACILLUS LICHENIFORMIS	252-288							
PASPO_ERWCH	L-ASPARAGINASE PRECURSOR	ERWINIA CHRYSANTHEMI	188-218							
PASPO_ACIGL	GLUTAMINASE-ASPARAGINASE	ACINETOBACTER GLUTAMINASIFICANS	46-80							
PASSY_ECOLI	ARGININOSUCCINATE SYNTHASE	ESCHERICHIA COLI	334-381							
PASSY_METBA	ARGININOSUCCINATE SYNTHASE	METHANOSARCINA BARKERI	287-314							
PATBP_STAAU	POTENTIAL ATP-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	41-68	201-245						
PATKA_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE A	ENTEROCOCCUS FAECALIS	41-80	347-374						
PATKB_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE B	ENTEROCOCCUS FAECALIS	280-310	450-477						
PATMB_SALTY	MG(2+) TRANSPORT ATPASE, P-TYPE	SALMONELLA TYPHIMURIUM	503-530							
PATN5_SYNPX	ATP SYNTHASE A CHAIN	SYNECHOCOCCUS SP	233-260							
PATN6_VIBAL	ATP SYNTHASE A CHAIN	VIBRIO ALGINOLYTICUS	11-38							
PATPA_ANASP	ATP SYNTHASE ALPHA CHAIN	ANABAENA SP	9-36	96-130						
PATPA_BACME	ATP SYNTHASE ALPHA CHAIN	BACILLUS MEGATERIUM	4-36	453-480						
PATPA_ECOLI	ATP SYNTHASE ALPHA CHAIN	ESCHERICHIA COLI	486-513							
PATPA_ENTFA	ATP SYNTHASE ALPHA CHAIN	ENTEROCOCCUS FAECALIS	4-36	486-518						
PATPA_MYCGA	ATP SYNTHASE ALPHA CHAIN	MYCOPLASMA GALLISEPTICUM	362-409							
PATPA_PROMO	ATP SYNTHASE ALPHA CHAIN	PROPIONIGENIUM MODESTUM	6-36							
PATPA_RHORU	ATP SYNTHASE ALPHA CHAIN	RHODOSPIRILLUM RUBRUM	163-200	439-486						
PATPA_SULAC	ATPASE ALPHA CHAIN	SULFOLOBUS ACIDOCALDARIUS	318-345	562-589						
PATPA_SYNP1	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	7-44							
PATPA_SYNP6	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	8-45	382-389						
PATPA_SYNY3	ATP SYNTHASE ALPHA CHAIN	SYNECHOCYSTIS SP	8-37	434-500						
PATPA_THEP3	ATP SYNTHASE ALPHA CHAIN	THERMOPHILIC BACTERIUM PS-3	9-36							
PATPA_VIBAL	ATP SYNTHASE ALPHA CHAIN	VIBRIO ALGINOLYTICUS	464-513							
PATPB_ANASP	ATP SYNTHASE BETA CHAIN	ANABAENA SP	280-307	370-397						
PATPB_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	163-190	358-385						
PATPB_MYCGA	ATP SYNTHASE BETA CHAIN	MYCOPLASMA GALLISEPTICUM	375-402							
PATPB_RHORU	ATP SYNTHASE BETA CHAIN	RHODOSPIRILLUM RUBRUM	359-386							
PATPB_SULAC	ATPASE BETA CHAIN	SULFOLOBUS ACIDOCALDARIUS	164-191							
PATPB_SYNP1	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	381-408							
PATPB_SYNP6	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	291-318	381-408						
PATPB_SYNY3	ATP SYNTHASE BETA CHAIN	SYNECHOCYSTIS SP	381-408							
PATPD_ANASP	ATP SYNTHASE DELTA CHAIN	ANABAENA SP	109-139	143-170						
PATPD_BACFI	ATP SYNTHASE DELTA CHAIN	BACILLUS FIRMUS	63-90	133-160						
PATPD_BACME	ATP SYNTHASE DELTA CHAIN	BACILLUS MEGATERIUM	132-159							
PATPD_ENTFA	ATP SYNTHASE DELTA CHAIN	ENTEROCOCCUS FAECALIS	14-41							
PATPD_PROMO	ATP SYNTHASE DELTA CHAIN	PROPIONIGENIUM MODESTUM	79-116	118-149						
PATPD_RHOBL	ATP SYNTHASE DELTA CHAIN	RHODOPSEUDOMONAS BLASTICA	123-152							
PATPD_RHORU	ATP SYNTHASE DELTA CHAIN	RHODOSPIRILLUM RUBRUM	119-146							

PCGENE	107s178.4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PATPD_SYNP1	ATP SYNTHASE DELTA CHAIN	SYNECHOCOCCUS SP	100-127								
PATPD_SYNY3	ATP SYNTHASE DELTA CHAIN	SYNECHOCYSTIS SP	113-147								
PATPD_VIBAL	ATP SYNTHASE DELTA CHAIN	VIBRIO ALGINOLYTICUS	110-133								
PATPE_BACFI	ATP SYNTHASE EPSILON CHAIN	BACILLUS FIRMUS	53-80								
PATPE_MYCGA	ATP SYNTHASE EPSILON CHAIN	MYCOPLASMA GALLISEPTICUM	99-126								
PATPE_PROMO	ATP SYNTHASE EPSILON CHAIN	PROPIONIGENIUM MODESTUM	100-127								
PATPE_SYNP1	ATP SYNTHASE EPSILON CHAIN	SYNECHOCOCCUS SP1	72-106								
PATPF_ANASP	ATP SYNTHASE B CHAIN	ANABAENA SP	17-44	51-78	137-164						
PATPF_BACFI	ATP SYNTHASE B CHAIN	BACILLUS FIRMUS	110-131								
PATPF_BACME	ATP SYNTHASE B CHAIN	BACILLUS MEGATERIUM	55-83	122-170							
PATPF_MYCGA	ATP SYNTHASE B CHAIN	MYCOPLASMA GALLISEPTICUM	82-135	170-197							
PATPF_SYNP1	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	15-49	111-159							
PATPF_SYNY6	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	12-39	128-155							
PATPF_THEP3	ATP SYNTHASE B CHAIN PRECURSOR	THERMOPHILIC BACTERIUM PS-3	50-77								
PATPG_ANASP	ATP SYNTHASE GAMMA CHAIN	ANABAENA SP	276-310								
PATPG_ECOLI	ATP SYNTHASE GAMMA CHAIN	ESCHERICHIA COLI	253-283								
PATPG_MYCGA	ATP SYNTHASE GAMMA CHAIN	MYCOPLASMA GALLISEPTICUM	28-62	92-140							
PATPG_RHORU	ATP SYNTHASE GAMMA CHAIN	RHODOSPIRILLUM RUBRUM	270-297								
PATPG_SYNP1	ATP SYNTHASE GAMMA CHAIN	SYNECHOCOCCUS SP	280-307								
PATPG_SYNY3	ATP SYNTHASE GAMMA CHAIN	SYNECHOCYSTIS SP	96-126	280-307							
PATPI_MYCGA	ATP SYNTHASE PROTEIN I	MYCOPLASMA GALLISEPTICUM	133-167								
PATPX_ANASP	ATP SYNTHASE B' CHAIN	ANABAENA SP	129-156								
PATPX_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	162-189	356-383							
PATPX_RHORU	ATP SYNTHASE B' CHAIN	RHODOSPIRILLUM RUBRUM	40-74								
PATPX_SYNP1	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	57-110	128-155							
PATPX_SYNY6	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	76-100								
PATPX_SYNY3	ATP SYNTHASE B' CHAIN	SYNECHOCYSTIS SP	108-135								
PATPZ_BACME	ATP SYNTHASE PROTEIN I	BACILLUS MEGATERIUM	14-62								
PATPZ_SYNP1	ATP SYNTHASE PROTEIN I	SYNECHOCOCCUS SP	90-131								
PAVRB_PSEAO	AVIRULENCE B PROTEIN	PSEUDOMONAS SYRINGAE	184-211	233-260							
PBA71_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBA72_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBACH_HALHA	HALORHODOPSIN	HALOBACTERIUM HALOBIUM	145-179								
PBACH_HALSO	HALORHODOPSIN PRECURSOR	HALOBACTERIUM SP	180-214								
PBAES_ECOLI	SENSOR PROTEIN BAES	ESCHERICHIA COLI	132-186								
PBAG_STRAG	IGA FC RECEPTOR PRECURSOR	STREPTOCOCCUS AGALACTIAE	92-119	138-204	267-306	343-383	487-524	562-589	1014-1041		
PBAHG_VITSP	BACTERIAL HEMOGLOBIN	VITREOSCILLA SP	119-146								
PBAJC_EUBSP	BILE ACID-INDUCIBLE OPERON PROTEIN C	EUBACTERIUM SP	423-450								
PBARA_ECOLI	SENSOR PROTEIN BARA	ESCHERICHIA COLI	334-361	423-455							
PBAS3_ECOLI	SENSOR PROTEIN BAS3	ESCHERICHIA COLI	122-156								
PBAT_HALHA	PUTATIVE BACTERIO-OPSIN ACTIVATOR	HALOBACTERIUM HALOBIUM	408-442								
PBAX_ECOLI	BAX PROTEIN	ESCHERICHIA COLI	21-64								
PBCCP_ECOLI	BIOTIN CARBOXYL CARRIER PROTEIN	ESCHERICHIA COLI	6-35								
PBCH1_RHOCA	METHYLTRANSFERASE	RHODOBACTER CAPSULATUS	1000-1032								
PBCHN_RHOCA	PROTOCHLOROPHYLLIDE REDUCTASE 46 KD CHAIN	RHODOBACTER CAPSULATUS	249-276								
PBCN3_CLOPE	BACTERIOCIN BCN3	CLOSTRIDIUM PERFRINGENS	72-99	585-646							
PBCYA_PROAE	BACTERIOCHLOROPHYLL A PROTEIN	PROSTHECOCHLORIS AESTUARII	63-93								
PBCSC_ACEXY	CELLULOSE SYNTHASE OPERON C PROTEIN	ACETOBACTER XYLINUM	131-158	1055-1082							
PBCSD_ACEXY	CELLULOSE SYNTHASE OPERON D PROTEIN	ACETOBACTER XYLINUM	10-37								
PBENA_ACICA	BENZOATE 1,2-DIOXYGENASE ALPHA SUBUNIT	ACINETOBACTER CALCOACETICUS	190-217								
PBETT_ECOLI	HIGH AFFINITY CHOLINE TRANSPORT PROTEIN	ESCHERICHIA COLI	243-270								
PBEXA_HAEIN	BEXA PROTEIN	HAEMOPHILUS INFLUENZAE	23-50								
PBEXC_HAEIN	BEXC PROTEIN	HAEMOPHILUS INFLUENZAE	157-184	226-253							
PBEXD_HAEIN	BEXD PROTEIN	HAEMOPHILUS INFLUENZAE	205-239								
PBFR_NITWI	BACTERIOFERRITIN	NITROBACTER WINOGRADSKYI	8-35								
PBGA3_ECOLI	EVOLVED BETA-GALACTOSIDASE ALPHA-SUBUNIT	ESCHERICHIA COLI	935-985								
PBGAL_BACST	BETA-GALACTOSIDASE	BACILLUS STEAROTHERMOPHILUS	599-633								

PCGENE	16Jul784	Prokaryotic Sequence									
TITLE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PBOAL_CLOAB	BETA-GALACTOSIDASE	CLOSTRIDIUM ACETOBUTYLICUM	824-851								
PBOAL_CLOTU	BETA-GALACTOSIDASE	CLOSTRIDIUM THERMOSULFUROGENES	161-191								
PBOAL_KLEPN	BETA-GALACTOSIDASE	KLEBSIELLA PNEUMONIAE	245-272								
PBOAL_LACOE	BETA-GALACTOSIDASE	LACTOBACILLUS DELBRUECKII	305-332								
PBOAL_STRTR	BETA-GALACTOSIDASE	STREPTOCOCCUS THERMOPHILUS	188-215								
PBOAL_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	59-86	179-206							
PBOAM_LEULA	BETA-GALACTOSIDASE SMALL SUBUNIT	LEUCONOSTOC LACTIS	129-156								
PBOAM_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	106-140								
PBOLA_CLOTM	BETA-GLUCOSIDASE A	CLOSTRIDIUM THERMOCELLUM	353-380	418-445							
PBOLB_CLOTM	THERMOSTABLE BETA-GLUCOSIDASE B	CLOSTRIDIUM THERMOCELLUM	239-286	375-409	554-581	631-665					
PBOLB_ECOLI	BETA-GLUCURONIDASE	ESCHERICHIA COLI	464-494	536-563							
PBOLS_AGRSP	BETA-GLUCOSIDASE	AGROBACTERIUM SP	421-448								
PBOLS_BUTFI	BETA-GLUCOSIDASE A	BUTYRIVIBRIO FIBRISOLVENS	85-112	433-462	692-719	738-765					
PBOND_STAAU	POTENTIAL DNA-INVERTASE BIN3	STAPHYLOCOCCUS AUREUS	60-87								
PBONL_STAAU	TRANSPOSON TN552 RESOLVASE	STAPHYLOCOCCUS AUREUS	163-197								
PBONR_STAAU	DNA-INVERTASE BINR	STAPHYLOCOCCUS AUREUS	163-190								
PBIOA_BACSH	AMINOTRANSFERASE	BACILLUS SPHAERICUS	33-60								
PBIOB_BACSH	BIOTIN SYNTHETASE	BACILLUS SPHAERICUS	145-172								
PBIOB_ECOLI	BIOTIN SYNTHETASE	ESCHERICHIA COLI	130-157								
PBIOD_BACSH	DETHIOBIOTIN SYNTHASE	BACILLUS SPHAERICUS	144-171								
PBLA1_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	91-118	275-305							
PBLA1_HAEIN	BETA-LACTAMASE ROB-1 PRECURSOR	HAEMOPHILUS INFLUENZAE	152-179	204-231							
PBLA2_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	18-47	201-228							
PBLA2_BACSP	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS SP	18-47								
PBLA3_BACCE	BETA-LACTAMASE PRECURSOR, TYPE III	BACILLUS CEREUS	15-43	95-129							
PBLA4_PSEAE	BETA-LACTAMASE PSE-4 PRECURSOR	PSEUDOMONAS AERUGINOSA	19-50								
PBLA8_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	20-66	200-227							
PBLAB_BACTR	BETA-LACTAMASE PRECURSOR, TYPE II	BACTEROIDES FRAGILIS	22-49								
PBLAC_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	93-120	276-303							
PBLAC_BACLI	BETA-LACTAMASE PRECURSOR	BACILLUS LICHENIFORMIS	47-74	86-115							
PBLAC_PROMI	BETA-LACTAMASE PRECURSOR	PROTEUS MIRABILIS	191-221								
PBLAC_PROVU	BETA-LACTAMASE	PROTEUS VULGARIS	4-38	240-267							
PBLAC_STRAL	BETA-LACTAMASE PRECURSOR	STREPTOMYCES ALBUS G	43-70								
PBLAD_KLEPN	BETA-LACTAMASE PRECURSOR	KLEBSIELLA PNEUMONIAE	121-148								
PBLAI_STAAU	PENICILLINASE REPRESSOR	STAPHYLOCOCCUS AUREUS	19-74	99-126							
PBLAO_ECOLI	BETA-LACTAMASE PRECURSOR	ESCHERICHIA COLI	118-166	233-262							
PBLAP_ECOLI	BETA-LACTAMASE PSE-3 PRECURSOR	ESCHERICHIA COLI	135-196								
PBLAR_BACLI	REGULATORY PROTEIN BLAR1	BACILLUS LICHENIFORMIS	129-156	315-552							
PBLAR_STAAU	REGULATORY PROTEIN BLAR1	STAPHYLOCOCCUS AUREUS	87-114	122-161	234-261	281-312	503-539				
PBMP_TREPA	BASIC MEMBRANE PROTEIN PRECURSOR	TREPONEMA PALLIDUM	312-346								
PBMR_BACSU	MULTIDRUG RESISTANCE PROTEIN	BACILLUS SUBTILIS	277-304								
PBNZA_PSEPU	BENZENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PBNZB_PSEPU	BENZENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PBNZD_PSEPU	P4 SUBUNIT	PSEUDOMONAS PUTIDA	179-211								
PBPS1_DESAM	BPS1 PROTEIN	DESULFUROLOBUS AMBIVALENS	157-237	242-290	311-355	391-425	543-573				
PBRAB_PSEAE	CARRIER PROTEIN	PSEUDOMONAS AERUGINOSA	260-287	313-340							
PBRAE_PSEAE	TRANSPORT PROTEIN BRAE	PSEUDOMONAS AERUGINOSA	254-281								
PBRAG_PSEAE	BRAG PROTEIN	PSEUDOMONAS AERUGINOSA	7-34								
PBTUB_ECOLI	VITAMIN B12 RECEPTOR PRECURSOR	ESCHERICHIA COLI	439-466								
PBTVE_ECOLI	VITAMIN B12 TRANSPORT PERIPLASMIC PROTEIN	ESCHERICHIA COLI	6-33								
PBVGA_BORPE	TRANSCRIPTION REGULATOR BVGA	BORDETELLA PERTUSSIS	174-205								
		BORDETELLA BRONCHISEPTICA									
PBVGB_BORPE	PERIPLASMIC PROTEIN BVGB PRECURSOR	BORDETELLA PERTUSSIS	116-143								
PBVGC_BORPE	SENSOR PROTEIN BVGC	BORDETELLA PERTUSSIS	39-66	202-229							
PBVGS_BORBR	VIRULENCE BVGS PROTEIN PRECURSOR	BORDETELLA BRONCHISEPTICA	113-143	341-368	501-531						
PBXA_CLOBO	BOTULINUM NEUROTOXIN TYPE A PRECURSOR	CLOSTRIDIUM BOTULINUM	313-340	646-729	733-762	815-842	851-893	968-995	1139-1207		
PBXB_CLOBO	BOTULINUM NEUROTOXIN TYPE B PRECURSOR	CLOSTRIDIUM BOTULINUM	666-693	726-762	802-832	853-890	1004-1031	1058-1089			

PCGENE	107a17b4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PBXC1_CLOBO	BOTULINUM NEUROTOXIN TYPE C1 PRECURSOR	CLOSTRIDIUM BOTULINUM	86-113	314-341	730-773	798-825	850-892				
PBXD_CLOBO	BOTULINUM NEUROTOXIN TYPE D PRECURSOR	CLOSTRIDIUM BOTULINUM	473-500	526-576	727-770	804-831	847-892	906-963	1060-1087		
PBXE_CLOBO	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BOTULINUM	234-291	330-381	704-753	773-811	890-917	992-1019	1115-1149		
PBXE_CLOBU	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BUTYRICUM	234-291	330-381	704-753	774-808	890-917	992-1019	1115-1149		
PBXF_CLOBO	BOTULINUM NEUROTOXIN TYPE F PRECURSOR	CLOSTRIDIUM BOTULINUM	669-710	735-772	892-919	1013-1040	1095-1122	1183-1210			
PC550_MICAE	CYTOCHROME C550	MICROCYSTIS AERUGINOSA	3-30								
PCADA_BACTI	PROBABLE CADMIUM-TRANSPORTING ATPASE	BACILLUS FIRMUS	30-57	108-131	165-192	276-306	533-567				
PCADA_STAAU	PROBABLE CADMIUM-TRANSPORTING ATPASE	STAPHYLOCOCCUS AUREUS	282-309	536-570							
PCADC_ECOLI	TRANSCRIPTIONAL ACTIVATOR CADC	ESCHERICHIA COLI	54-85	412-443							
PCAFA_YERPE	F1 CAPSULE ANCHORING PROTEIN PRECURSOR	YERSINIA PESTIS	203-240	416-457	530-557	619-646					
PCAPA_BACAN	CAPA PROTEIN	BACILLUS ANTHRACIS	108-138								
PCAPB_BACAN	CAPB PROTEIN	BACILLUS ANTHRACIS	36-70								
PCAPP_ANANT	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANACYSTIS NIDULANS	248-293								
PCAPP_ANASP	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANABAENA SP	98-125	157-184	687-728						
PCAPP_CORGL	PHOSPHOENOLPYRUVATE CARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	15-42								
PCAPP_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ESCHERICHIA COLI	15-42								
PCARA_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	274-319								
PCARB_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	790-831								
PCARB_ECOLI	CARBAMOYL-PHOSPHATE SYNTHASE LARGE CHAI	ESCHERICHIA COLI	454-481								
PCAT3_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCAT3_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCATA_ACICA	CATECHOL 1,2-DIOXYGENASE	ACINETOBACTER CALCOACETICUS	31-65								
PCATA_BACST	PEROXIDASE / CATALASE	BACILLUS STEAROTHERMOPHILUS	440-470								
PCATA_ECOLI	CATALASE HPI	ESCHERICHIA COLI	379-406								
PCATA_MICLU	CATALASE	MICROCOCCUS LUTEUS	433-480								
PCATA_SALTY	CATALASE HPI	SALMONELLA TYPHIMURIUM	515-542	580-607							
PCATE_ECOLI	CATALASE HPII	ESCHERICHIA COLI	175-202								
PCAT_CAMCO	CHLORAMPHENICOL ACETYLTRANSFERASE	CAMPYLOBACTER COLI	84-111								
PCAT_CLOBU	CHLORAMPHENICOL ACETYLTRANSFERASE	CLOSTRIDIUM BUTYRICUM	88-115								
PCAT_ECOLI	CHLORAMPHENICOL ACETYLTRANSFERASE	ESCHERICHIA COLI	92-119								
PCAT_PROMI	CHLORAMPHENICOL ACETYLTRANSFERASE	PROTEUS MIRABILIS	92-119								
PCAT_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS INTERMEDIUS	7-34	87-114							
PCAT_STRAG	CHLORAMPHENICOL ACETYLTRANSFERASE	STREPTOCOCCUS AGALACTIAE	7-34	87-114							
PCBHE_COXBU	CBHE PROTEIN	COXIELLA BURNETII	209-236								
PCBPT_THEVU	CARBOXYPEPTIDASE T PRECURSOR	THERMOACTINOMYCES VULGARIS	48-75								
PCCA_ECOLI	TRNA NUCLEOTIDYLTRANSFERASE	ESCHERICHIA COLI	376-403								
PCCOA_SYNP7	CO2 CONC MECH PROTEIN CCMK	SYNECHOCOCCUS SP	29-56								
PCCOM_SYNP7	CO2 CONC MECH PROTEIN CCMM	SYNECHOCOCCUS SP	212-256	311-332	445-486						
PCDA3_THEET	CYCLOMALTODEXT GLUCANOTRANSFERASE	THERMOANAEROBACTER ETHANOLICUS	305-332								
PCDG1_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	439-466	616-643							
PCDG1_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	210-237	416-466	615-642						
PCDGT_BACCI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS CIRCULANS	217-244	442-472	594-631						
PCDGT_BACLI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS LICHENIFORMIS	217-244	442-472	594-647						
PCDGT_BACOH	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS OHBENSIS	430-471								
PCDGT_BACSO	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	615-642						
PCDGT_BACSU	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	409-471								
PCDGT_BACSU	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	614-641						
PCDGT_BACSP	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-465	615-642						
PCDGT_BACST	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	217-244	442-472	594-631						
PCDGT_BACST	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS STEAROTHERMOPHILUS	586-646								
PCDGT_KLEPN	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	KLEBSIELLA PNEUMONIAE	212-239								
PCEA1_ECOLI	COLICIN E1 PROTEIN	ESCHERICHIA COLI	44-71	283-326							
PCEA1_SHIDS	COLICIN E1 * PROTEIN	SHIGELLA SONNEI	44-71	284-325	413-440						
PCEA2_ECOLI	COLICIN E2	ESCHERICHIA COLI	334-368								
PCEA2_ECOLI	COLICIN E2	ESCHERICHIA COLI	334-368								
PCEA6_ECOLI	COLICIN E6	ESCHERICHIA COLI	334-368								
PCEAB_ECOLI	COLICIN B	ESCHERICHIA COLI	283-341								

PGENE	Identified	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM	284-311								
PCEAD_ECOLI	COLICIN D	ESCHERICHIA COLI	178-227								
PCEAM_ECOLI	COLICIN M	ESCHERICHIA COLI	119-146	173-200							
PCEAN_ECOLI	COLICIN N	ESCHERICHIA COLI	228-258								
PCEA_CITFR	COLICIN A	CITROBACTER FREUNDII	370-397								
PCEFD_STRCL	ISOPENICILLIN N EPIMERASE	STREPTOMYCES CLAVULIGERUS	68-93	255-282	378-412	415-452					
PCEIA_ECOLI	COLICIN IA PROTEIN	ESCHERICHIA COLI	68-93	255-282	378-412	415-452					
PCEIB_ECOLI	COLICIN IB PROTEIN	ESCHERICHIA COLI	68-93	255-282	378-412	415-452					
PCEL_ACEXY	UTP URIDYLYLTRANSFERASE	ACETOBACTER XYLINUM	59-89								
PCELA_ECOLI	PROTEIN CELA	ESCHERICHIA COLI	78-103								
PCFAA_ECOLI	CFA/I FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	27-58								
PCFAC_ECOLI	CFA/I FIMBRIAL SUBUNIT C PRECURSOR	ESCHERICHIA COLI	138-187	388-436	561-595						
PCFAD_ECOLI	CFA/I FIMBRIAL SUBUNIT D	ESCHERICHIA COLI	133-160								
PCFAE_ECOLI	CFA/I FIMBRIAL SUBUNIT E	ESCHERICHIA COLI	180-207	244-271							
PCH10_ACYPS	10 KD CHAPERONIN	ACTINOSIPHON PISUM SYMBIOTIC BACTERIUM	51-95								
PCH10_BACSU	10 KD CHAPERONIN	BACILLUS SUBTILIS	66-93								
PCH10_CHLTR	10 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	64-91								
PCH10_ECOLI	10 KD CHAPERONIN	ESCHERICHIA COLI	57-84								
PCH10_HAEDU	10 KD CHAPERONIN	HAEMOPHILUS DUCREYI	68-95								
PCH10_LEGMI	10 KD CHAPERONIN	LEGIONELLA MICDADEI	57-84								
PCH10_RICTS	10 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	65-92								
PCH10_THEP3	10 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	66-93								
PCH60_ACYPS	60 KD CHAPERONIN	ACTINOSIPHON PISUM SYMBIOTIC BACTERIUM	341-382								
PCH60_AGRTU	60 KD CHAPERONIN	AGROBACTERIUM TUMEFACIENS	117-163	339-370	425-466						
PCH60_AMOPS	60 KD CHAPERONIN	AMOEBA PROTEUS SYMBIOTIC BACTERIUM	299-333								
PCH60_BACSU	60 KD CHAPERONIN	BACILLUS SUBTILIS	298-332	337-364							
PCH60_BORBU	60 KD CHAPERONIN	BORRELIA BURGDORFERI	125-163	299-368							
PCH60_BRUAB	60 KD CHAPERONIN	BRUCELLA ABORTUS	117-144	339-366							
PCH60_CHLPN	60 KD CHAPERONIN	CHLAMYDIA PNEUMONIAE	4-31								
PCH60_CHLTR	60 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	4-31								
PCH60_CHRVI	60 KD CHAPERONIN	CHROMATIUM VINOSUM	300-327								
PCH60_CLOAB	60 KD CHAPERONIN	CLOSTRIDIUM ACETOBUTYLICUM	218-332	337-364	455-482						
PCH60_CLOPE	60 KD CHAPERONIN	CLOSTRIDIUM PERFRINGENS	337-368	417-444							
PCH60_COXBU	60 KD CHAPERONIN	COXIELLA BURNETII	300-327	348-382							
PCH60_HAEDU	60 KD CHAPERONIN	HAEMOPHILUS DUCREYI	339-366	417-444							
PCH60_LEGMI	60 KD CHAPERONIN	LEGIONELLA MICDADEI	299-333								
PCH60_LEGPN	60 KD CHAPERONIN	LEGIONELLA PNEUMOPHILA	298-332	432-479							
PCH60_MYCLE	60 KD CHAPERONIN	MYCOBACTERIUM LEPRAE	125-152	236-263	337-364						
PCH60_MYCTU	60 KD CHAPERONIN	MYCOBACTERIUM TUBERCULOSIS & BOVIS	125-152	337-364							
PCH60_PSEAE	60 KD CHAPERONIN	PSEUDOMONAS AERUGINOSA	339-366								
PCH60_RHIEL	60 KD CHAPERONIN	RHIZOBIUM LEGUMINOSARUM	117-163	322-370	425-466						
PCH60_RICTS	60 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	103-130	293-326	360-394						
PCH60_SYN77	60 KD CHAPERONIN	SYNECHOCOCCUS SP	308-335	337-380							
PCH60_SYNY3	60 KD CHAPERONIN	SYNECHOCYSTIS SP	338-365	455-489							
PCH60_THEP3	60 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	337-364								
PCH63_STRAL	60 KD CHAPERONIN 2	STREPTOMYCES ALBUS G	116-148	337-364							
PCHB_VIBHA	N,N'-DIACETYLCHITOBIASE PRECURSOR	VIBRIO HARVEYI	21-48	772-799							
PCHEA_BACSU	CHEMOTAXIS PROTEIN CHEA	BACILLUS SUBTILIS	373-400	590-617							
PCHEA_ECOLI	CHEMOTAXIS PROTEIN CHEA	ESCHERICHIA COLI	256-284								
PCHEA_SALTY	CHEMOTAXIS PROTEIN CHEA	SALMONELLA TYPHIMURIUM	162-197								
PCHER_BACSU	CHEMOTAXIS PROTEIN METHYLTRANSFERASE	BACILLUS SUBTILIS	124-151								
PCHEW_ECOLI	PURINE-BINDING CHEMOTAXIS PROTEIN	ESCHERICHIA COLI	68-115								
PCHEW_SALTY	PURINE-BINDING CHEMOTAXIS PROTEIN	SALMONELLA TYPHIMURIUM	88-115								
PCHEY_ECOLI	CHEMOTAXIS PROTEIN CHEY	ESCHERICHIA COLI	22-49								
PCHEY_SALTY	CHEMOTAXIS PROTEIN CHEY	SALMONELLA TYPHIMURIUM	22-49								
PCHI1_BACCI	CHITINASE A1 PRECURSOR	BACILLUS CIRCULANS	491-518	566-593							
PCHIA_ALTPO	CHITINASE A PRECURSOR	ALTEROMONAS SP	345-372								
PCHIA_SERMA	CHITINASE A PRECURSOR	SERRATIA MARCESCENS	346-373								

PCGENE ID/ACCESSION	Prokaryotic Sequence	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILE NAME / PROTEIN	ORGANISM								
PCHID_BACCI CHITINASE D PRECURSOR	BACILLUS CIRCULANS	102-161	189-216						
PCHIT_SACER CHITINASE	SACCHAROPOLYSPORA ERYTHRAEA	92-119							
PCHIT_STRPL CHITINASE 63 PRECURSOR	STREPTOMYCES PLICATUS	250-284							
PCHRU_BACSU CHORISMATE MUTASE	BACILLUS SUBTILIS	3-37							
PCHOD_BREST CHOLESTEROL OXIDASE PRECURSOR	BREVIBACTERIUM STEROLICUM	263-290							
PCHTA_VIBCH CHOLERA ENTEROTOXIN, A CHAIN PRECURSOR	VIBRIO CHOLERAE	78-106							
PCHVA_AGATU BETA-(1-->3)GLUCAN EXPORT PROTEIN	AGROBACTERIUM TUMEFACIENS	4-31	181-208						
PCHVE_AGATU RECEPTOR PROTEIN CHVE PRECURSOR	AGROBACTERIUM TUMEFACIENS	100-127							
PCIR1_CITFR CITROLYSIN PROTEIN 1	CITROBACTER FREUNDII	435-462							
PCIRA_ECOLI COLICIN I RECEPTOR PRECURSOR	ESCHERICHIA COLI	146-173							
PCISA_BACSU PUTATIVE DNA RECOMBINASE	BACILLUS SUBTILIS	378-405							
PCIST_AGIAN CITRATE SYNTHASE	ACINETOBACTER ANITRATUM	143-170							
PCIST_BACCO CITRATE SYNTHASE	BACILLUS COAGULANS	24-51							
PCITA_SALTY CITRATE-PROTON SYMPORT	SALMONELLA TYPHIMURIUM	154-181							
PCITN_KLEPN CITRATE-SODIUM SYMPORT	KLEBSIELLA PNEUMONIAE	194-221							
PCITN_SALDU CITRATE-SODIUM SYMPORT	SALMONELLA DUBLIN	194-221							
PCITN_SALPU CITRATE-SODIUM SYMPORT	SALMONELLA PULLORUM	194-221							
PCLCA_PSEPU CHLOROCATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS PUTIDA	13-36							
PCLDI_ECOLI CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	133-167							
PCLD2_ECOLI CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	178-212	230-257						
PCLD_SALTY CHAIN LENGTH DETERMINANT PROTEIN	SALMONELLA TYPHIMURIUM	96-127	151-212						
PCLOS_CLOHI ALPHA-CLOSTRIPAIN PRECURSOR	CLOSTRIDIUM HISTOLYTICUM	30-58	497-534						
PCLPA_ECOLI ATP-BINDING SUBUNIT CLPA	ESCHERICHIA COLI	653-695							
PCLPA_RHOBL CLPA HOMOLOG PROTEIN	RHODOPSEUDOMONAS BLASTICA	419-466							
PCLPB_BACMO CLPB HOMOLOG PROTEIN	BACTEROIDES NODOSUS	116-157	442-476	558-595					
PCLPB_ECOLI CLPB PROTEIN	ESCHERICHIA COLI	444-489	563-590						
PCLPX_AZOVI CLPX HOMOLOG PROTEIN	AZOTOBACTER VINELANDII	215-242	332-359						
PCLPX_ECOLI ATP-BINDING SUBUNIT CLPX	ESCHERICHIA COLI	255-282							
PCN16_ECOLI 2',3'-CYCLIC-NUC 2'-PHOSPHODIESTERASE PRECURS	ESCHERICHIA COLI	30-77							
PCODA_ECOLI CYTOSINE DEAMINASE	ESCHERICHIA COLI	102-139							
PCOM1_BACSU A COMPETENCE PROTEIN 1	BACILLUS SUBTILIS	108-135	186-213						
PCOMQ_BACSU COMPETENCE REGULATORY PROTEIN	BACILLUS SUBTILIS	154-239							
PCOP5_STAAU COP-5 PROTEIN	STAPHYLOCOCCUS AUREUS	7-53							
PCOPB_PSESM COPPER RESISTANCE PROTEIN B PRECURSOR	PSEUDOMONAS SYRINGAE	140-167							
PCORA_ECOLI MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	ESCHERICHIA COLI	134-161							
PCORA_SALTY MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	SALMONELLA TYPHIMURIUM	134-161							
PCOTE_BACSU SPORE COAT PROTEIN E	BACILLUS SUBTILIS	42-92							
PCOX1_BRAJA CYTOCHROME C OXIDASE POLYPEPTIDE I	BRADYRHIZOBIUM JAPONICUM	380-407							
PCOX1_PARDE CYTOCHROME C OXIDASE POLYPEPTIDE I	PARACOCCUS DENITRIFICANS	383-410							
PCOX1_RHOSH CYTOCHROME C OXIDASE POLYPEPTIDE I	RHODOBACTER SPHAEROIDES	396-423							
PCOX2_BACFI OXIDASE ASSEMBLY FACTOR	BACILLUS FIRMUS	36-63							
PCOX2_BACSU OXIDASE ASSEMBLY FACTOR	BACILLUS SUBTILIS	49-76							
PCP1B_NEIGO CRYPTIC PLASMID PROTEIN B	NEISSERIA GONORRHOEAE	72-99	165-209						
PCP1B_ECOLI MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	ESCHERICHIA COLI	309-336							
PCP1B_SALTY MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	311-338							
PCP1X_ECOLI SENSOR PROTEIN CPXA	ESCHERICHIA COLI	254-281							
PCP1X0_STRSQ CYTOCHROME P450 105C1	STREPTOMYCES SP	157-184							
PCP1X_SACER 6-DEOXYERYTHRONOLIDE B (DEB) HYDROXYLASE	SACCHAROPOLYSPORA ERYTHRAEA	233-260							
PCP1X4_BACSU CYTOCHROME P450 109	BACILLUS SUBTILIS	240-283							
PCP1XN_ANASP PROBABLE CYTOCHROME P450	ANABAENA SP	98-125							
PCRI7_BACTI 27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187							
PCRI7_BACTM 27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187							
PCRI1_BACSH 1.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308							
PCRI2_BACSH 1.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308							
PCRI3_BACSH 41.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308							
PCRI70_BACTD 70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	207-234	253-279	429-463					
PCRI70_BACTO 73 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	57-84	125-159	427-464					

FOGENE	1971171t4	Prokaryotic Sequences									
FIZZ_NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCA70_BACTI	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	199-226	244-271	421-455						
PCA71_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-615						
PCA72_BACTI	72 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	74-111	383-414							
PCA72_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-593						
PCA77_BACTI	77 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	308-333	502-529							
PCAEC_ECOLI	SENSOR PROTEIN CAEC	ESCHERICHIA COLI	103-130								
PCAED_ECOLI	INNER MEMBRANE PROTEIN CAED	ESCHERICHIA COLI K	94-121								
PCAP_ECOLI	CATABOLITE GENE ACTIVATOR	ESCHERICHIA COLI &	26-53	127-154							
		SHIGELLA FLEXNERI									
PCAP_SALTY	CATABOLITE GENE ACTIVATOR	SALMONELLA TYPHIMURIUM	26-53	127-154							
		KLEBSIELLA AEROGENES									
PCAT1_ERWHE	PHYTOENE DEHYDROGENASE	ERWINIA HERBICOLA	231-258								
PCAT1_RHOCA	PHYTOENE DEHYDROGENASE	RHODOBACTER CAPSULATUS	389-416								
PCAT1_RHOCA	CRTI PROTEIN	RHODOBACTER CAPSULATUS	133-160	334-361	431-458						
PCAY8_BACTA	132 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	721-755	875-902							
PCAY8_BACTB	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	730-771	865-892	1053-1080						
PCAY8_BACTE	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCAY8_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	718-752	761-788	775-802						
PCAY8_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1053-1080						
PCAY8_BACTS	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCAY8_BACTT	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	730-771	865-892	1053-1080						
PCAY8_BACTE	134 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779	899-926							
PCAY8_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	775-802						
PCAY8_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCAY8_BACTA	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	700-727	774-801						
PCAY8_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	738-772	866-893	1054-1081						
PCAY8_BACTK	131 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1053-1080						
PCAY8_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	110-151	745-772	819-846						
PCAY8_BACTI	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCAY8_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779								
PCAY8_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	408-439	662-696	892-919						
PCAY8_BACTK	139 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	92-110	227-254	601-632	783-817	937-964				
PCB33_ECOLI	CB3 PILI SYNTHESIS 60 KD PROTEIN	ESCHERICHIA COLI	42-69	228-255	390-317	344-378					
PCB33_ECOLI	CB3 PILI SYNTHESIS 64 KD PROTEIN	ESCHERICHIA COLI	90-117	154-181	208-242						
PCB34_ECOLI	CB3 PILI SYNTHESIS 33 KD PROTEIN	ESCHERICHIA COLI	30-47	74-108							
PCB0_HALHA	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM HALOBIUM	236-283	384-411							
PCB0_HALVO	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM VOLCANII	143-170	237-271							
PCB0_METTE	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS FERVIDUS	59-107								
PCB0_METJC	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS SOCIABILIS	59-107								
PCB0B_ECOLI	CB1 FIMBRIAL SUBUNIT B PRECURSOR	ESCHERICHIA COLI	25-56								
PCBTA_CLOAB	COA-TRANSFERASE SUBUNIT A	CLOSTRIDIUM ACETOBUTYLICUM	118-145								
PCBTB_CLOAB	COA-TRANSFERASE SUBUNIT B	CLOSTRIDIUM ACETOBUTYLICUM	174-208								
PCBTB_NEIME	INNER-MEMBRANE PROTEIN CTRB	NEISSERIA MENINGITIDIS	152-193								
PCBTX_PSEAE	CYTOTOXIN PRECURSOR	PSEUDOMONAS AERUGINOSA	78-115	124-151	160-194	217-251					
PCBVA_ECOLI	COLICIN V SECRETION PROTEIN CVAA	ESCHERICHIA COLI	104-138	163-219							
PCBVB_ECOLI	COLICIN V SECRETION PROTEIN CVAB	ESCHERICHIA COLI	151-178								
PCWPM_BACSR	MIDDLE CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	197-224	411-438	1010-1044						
PCWPO_BACSR	OUTER CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	178-216	560-587	947-988						
PCYAA_BORPE	ADENYLATE CYCLASE PRECURSOR	BORDETELLA PERTUSSIS	48-75	632-659	963-996						
PCYAA_YERLN	ADENYLATE CYCLASE	YERSINIA INTERMEDIA	340-387	593-620							
PCYAB_BORPE	CYAB PROTEIN	BORDETELLA PERTUSSIS	541-568								
PCYAD_BORPE	CYAD PROTEIN	BORDETELLA PERTUSSIS	178-212								
PCYAE_BORPE	CYAE PROTEIN	BORDETELLA PERTUSSIS	313-340								
PCYB_RHOCA	CYTOCHROME B	RHODOBACTER CAPSULATUS	38-65								
PCYDD_ECOLI	TRANSPORT PROTEIN CYDD	ESCHERICHIA COLI	330	382-409							
PCYP_NOSSP	APOCYTOCHROME F PRECURSOR	NOSTOC SP	209-243								

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCYMO_ACISP	CYCLOHEXANONE MONOOXYGENASE	ACINETOBACTER SP	439-473								
PCYNT_SYNP7	CARBONIC ANHYDRASE	SYNECHOCOCCUS SP	170-200								
PCYNX_ECOLI	CYNX PROTEIN	ESCHERICHIA COLI	53-80								
PCYOB_ECOLI	CYTOCHROME O UBIQUINOL OXIDASE SUBUNIT I	ESCHERICHIA COLI	31-58								
PCYPH_SYNP7	PEPTIDYL-PROLYL CIS-TRANS ISOMERASE	SYNECHOCOCCUS SP	107-141								
PCYSA_ECOLI	SULFATE PERMEASE A PROTEIN	ESCHERICHIA COLI	164-191								
PCYSB_ECOLI	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	3-30								
PCYSB_SALTY	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	SALMONELLA TYPHIMURIUM	3-30								
PCYSE_ECOLI	SERINE ACETYLTRANSFERASE	ESCHERICHIA COLI	164-191								
PCYSE_SALTY	SERINE ACETYLTRANSFERASE	SALMONELLA TYPHIMURIUM	164-191								
PCYSG_ECOLI	SIROHEM SYNTHASE	ESCHERICHIA COLI	405-432								
PCYSG_SALTY	SIROHEM SYNTHASE	SALMONELLA TYPHIMURIUM	405-432								
PCYSN_ECOLI	SULFATE ADENYLATE TRANSFERASE SUBUNIT 1	ESCHERICHIA COLI	64-91								
PCYSW_ECOLI	SULFATE PERMEASE W PROTEIN	ESCHERICHIA COLI	201-228								
PCYSW_SYNP7	SULFATE PERMEASE W PROTEIN	SYNECHOCOCCUS SP	211-238								
PCZCB_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCB	ALCALIGENES EUTROPHUS	241-268	283-320	364-391						
PCZCD_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCD	ALCALIGENES EUTROPHUS	139-169								
PDACB_BACSU	PENICILLIN-BINDING PROTEIN 5* PRECURSOR	BACILLUS SUBTILIS	80-107								
PDADA_ECOLI	D-AMINO ACID DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PDAGA_ALTHA	NA(+)-LINKED D-ALANINE GLYCINE PERMEASE	ALTEROMONAS HALOPLANKTIS	332-373								
PDAMX_ECOLI	DAMX PROTEIN	ESCHERICHIA COLI	68-95	349-380							
PDAPA_ECOLI	DIHYDRODIPICOLINATE SYNTHASE	ESCHERICHIA COLI	27-54	157-184							
PDATI_BACSU	DNA--PROTEIN-CYSTEINE METHYLTRANSFERASE	BACILLUS SUBTILIS	13-47								
PDBHA_ECOLI	DNA-BINDING PROTEIN HU-ALPHA	ESCHERICHIA COLI	12-39								
PDBH_CLOPA	DNA-BINDING PROTEIN HU	CLOSTRIDIUM PASTEURIANUM	12-53								
PDCAM_ECOLI	DECARBOXYLASE PROENZYME	ESCHERICHIA COLI	146-173								
PDCDA_CORGL	DIAMINOPIMELATE DECARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	134-161								
PDCDA_PSEAE	DIAMINOPIMELATE DECARBOXYLASE	PSEUDOMONAS AERUGINOSA	57-84								
PDCEB_ECOLI	GLUTAMATE DECARBOXYLASE BETA	ESCHERICHIA COLI	4-31								
PDCHS_ENTAE	HISTIDINE DECARBOXYLASE	ENTEROBACTER AEROGENES	111-138								
PDCHS_KLEPL	HISTIDINE DECARBOXYLASE	KLEBSIELLA PLANTICOLA	111-138								
PDCHS_MORMO	HISTIDINE DECARBOXYLASE	MORGANELA MORGANII	111-138								
PDCID_BACSU	DIPEPTIDE TRANSPORT PROTEIN DCIAD	BACILLUS SUBTILIS	188-222								
PDCLY_HAFAL	LYSINE DECARBOXYLASE	HAFNIA ALVEI	305-332								
PDCOA_KLEPN	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	KLEBSIELLA PNEUMONIAE	261-288	342-369							
PDCOA_SALTY	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	SALMONELLA TYPHIMURIUM	261-288	342-369							
PDCOB_SALTY	OXALOACETATE DECARBOXYLASE BETA CHAIN	SALMONELLA TYPHIMURIUM	299-326								
PDCTB_RHILE	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM LEGUMINOSARUM	377-411								
PDCTB_RHIME	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM MELILOTI	511-538								
PDEAD_ECOLI	ATP-DEPENDENT RNA HELICASE DEAD	ESCHERICHIA COLI	268-295	518-545							
PDEAD_KLEPN	ATP-DEPENDENT RNA HELICASE DEAD	KLEBSIELLA PNEUMONIAE	267-294	519-546							
PDEDA_ECOLI	DEDA PROTEIN	ESCHERICHIA COLI	106-133								
PDEGS_BACSU	SENSOR PROTEIN DEGS	BACILLUS SUBTILIS	31-70	75-159	292-327						
PDEH2_MORSP	HALOACETATE DEHALOGENASE H-2	MORAXELLA SP	114-141								
PDEOC_ECOLI	DEOXYRIBOSE-PHOSPHATE ALDOLASE	ESCHERICHIA COLI	134-161								
PDHAL_PSEOL	ALDEHYDE DEHYDROGENASE	PSEUDOMONAS OLEOVORANS	6-33								
PDHAS_BACSU	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	BACILLUS SUBTILIS	150-184								
PDHAS_CORGL	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	43-70	312-339							
PDHAS_ECOLI	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	ESCHERICHIA COLI	229-256								
PDHAS_VIBCH	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	VIBRIO CHOLERAE	309-336								
PDHA_BACSH	ALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	149-176								
PDHA_BACST	ALANINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	94-121								
PDHE2_CLODI	NAD-SPECIFIC GLUTAMATE DEHYDROGENASE	CLOSTRIDIUM DIFFICILE	116-143								
PDHE2_PEPAS	D-SPECIFIC GLUTAMATE DEHYDROGENASE	PEPTOSTREPTOCOCCUS ASACCHAROLYTICUS	247-274	345-380							
PDHE3_SULSO	GLUTAMATE DEHYDROGENASE	SULFOLOBUS SOLFATARICUS	2-36								
PDHE4_CORGL	NADP-SPECIFIC GLUTAMATE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	188-215	229-256							
PDHGA_ACICA	GLUCOSE DEHYDROGENASE-A	ACINETOBACTER CALCOACETICUS	10-59	190-217							

FCGENE	1671178.4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PDHGB_BACKE	GLUCOSE 1-DEHYDROGENASE B	BACILLUS MEGATERIUM	27-57								
PDHG_ECOLI	GLUCOSE DEHYDROGENASE	ESCHERICHIA COLI	436-463								
PDHO_ECOLI	KETOACYL REDUCTASE I	STREPTOMYCES VIOLACEORUBER	108-195								
PDHK1_STRVN	LEUCINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	192-219								
PDHLE_BACST	D-LYSOPINE DEHYDROGENASE	AGROBACTERIUM TUMEFACIENS	317-344								
PDHMT_METEX	METHANOL DEHYDROGENASE SUBUNIT I PREC	METHYLOBACTERIUM EXTORQUENS	133-187	190-224							
PDHMT_METOR	METHANOL DEHYDROGENASE SUBUNIT I PREC	METHYLOBACTERIUM ORGANOPHILUM	133-187	190-224							
PDHMT_PAUDE	METHANOL DEHYDROGENASE SUBUNIT I PREC	PARACOCCUS DENITRIFICANS	195-222								
PDHNA_BACSP	NADH DEHYDROGENASE	BACILLUS SP	284-314								
PDHNA_ECOLI	NADH DEHYDROGENASE	ESCHERICHIA COLI	180-214								
PDHOM_BACSU	HOMOSERINE DEHYDROGENASE	BACILLUS SUBTILIS	73-107	406-433							
PDHOM_CORGL	HOMOSERINE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	105-132								
PDHPH_BACSH	PHENYLALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	212-239								
PDHSA_ECOLI	SUCC DEHYDROGENASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	482-512								
PDHSS_ANACY	SOLUBLE HYDROGENASE 42 KD SUBUNIT	ANABAENA CYLINDRICA	86-113	130-168							
PDHSS_SYNPI	SOLUBLE HYDROGENASE, SMALL SUBUNIT	SYNECHOCOCCUS SP	133-160								
PDHTM_METME	TRIMETHYLAMINE DEHYDROGENASE	METHYLOTROPHUS METHYLOPHILUS	439-466								
PDING_ECOLI	PROBABLE ATP-DEPENDENT HELICASE DING	ESCHERICHIA COLI	584-611								
PDIVB_BACSU	DIVISION INITIATION PROTEIN	BACILLUS SUBTILIS	54-82	114-141							
PDLD1_PSEPU	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS PUTIDA	93-120								
PDLDH_AZOVI	LIPOAMIDE DEHYDROGENASE COMP (E3)	AZOTOBACTER VINELANDII	18-45	224-276							
PDLDH_BACST	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS STEAROTHERMOPHILUS	82-124								
PDLDH_BACSU	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS SUBTILIS	82-109								
PDLDH_ECOLI	DIHYDROLIPOAMIDE DEHYDROGENASE	ESCHERICHIA COLI	108-135								
PDLDH_PSEFL	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	124-151	223-275							
PDMPN_PSEPU	PHENOL HYDROXYLASE P3 PROTEIN	PSEUDOMONAS PUTIDA	61-90								
PDNAI_BACSU	DNAI PROTEIN	BACILLUS SUBTILIS	497-524	548-581							
PDNAJ_BACSU	DNAJ PROTEIN	BACILLUS SUBTILIS	456-483								
PDNAA_BACSU	DNAA PROTEIN	BACILLUS SUBTILIS	316-380								
PDNAA_BORBU	DNAA PROTEIN	BORRELIA BURGDORFERI	182-216	248-275	341-387	436-463					
PDNAA_BUCAP	DNAA PROTEIN	BUCHNERA APHIDICOLA	73-100	111-138	353-380						
PDNAA_ECOLI	DNAA PROTEIN	ESCHERICHIA COLI	366-400								
PDNAA_MICLU	DNAA PROTEIN	MICROCOCCUS LUTEUS	389-415								
PDNAA_MYCCA	DNAA PROTEIN	MYCOPLASMA CAPRICOLUM	8-36	75-112	274-310	336-389					
PDNAA_PROMI	DNAA PROTEIN	PROTEUS MIRABILIS	263-299								
PDNAA_PSEPU	DNAA PROTEIN	PSEUDOMONAS PUTIDA	398-439								
PDNAA_SPICI	DNAA PROTEIN	SPIROPLASMA CITRI	43-72	76-110	145-180						
PDNAB_CHLTR	DNAB-LIKE PROTEIN	CHLAMYDIA TRACHOMATIS	212-253								
PDNAB_ECOLI	DNAB PROTEIN	ESCHERICHIA COLI	82-109								
PDNAB_SALTY	DNAB PROTEIN	SALMONELLA TYPHIMURIUM	82-109								
PDNAC_ECOLI	DNAC PROTEIN	ESCHERICHIA COLI	146-190								
PDNAK_BACME	DNAK PROTEIN	BACILLUS MEGATERIUM	497-524	548-581							
PDNAK_BORBU	DNAK PROTEIN	BORRELIA BURGDORFERI	512-594								
PDNAK_BRUOV	DNAK PROTEIN	BRUCELLA OVIS	248-275	512-546							
PDNAK_CAUCR	DNAK PROTEIN	CAULOBACTER CRESCENTUS	561-588								
PDNAK_CLOAB	DNAK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	499-526								
PDNAK_CLOPE	DNAK PROTEIN	CLOSTRIDIUM PERFRINGENS	496-527								
PDNAK_METMA	DNAK PROTEIN	METHANOSARCINA MAZEI	523-550								
PDNAK_MYCTU	DNAK PROTEIN	MYCOBACTERIUM TUBERCULOSIS	502-529								
PDNAK_STRCO	DNAK PROTEIN	STREPTOMYCES COELICOLOR	545-572	533-572							
PDNR_ECOLI	REGULATORY PROTEIN DNR	ESCHERICHIA COLI	114-141								
PDNLI_ZYMMO	DNA LIGASE	ZYMOMONAS MOBILIS	658-712								
PDNRJ_STRPE	TRANSDUCTION PROTEIN DNRJ	STREPTOMYCES PEUCETIUS	24-51								
PDOCK_SULSO	PROBABLE SIGNAL RECOGNITION PARTICLE PROTE	SULFOLOBUS SOLFATARICUS	104-172								
PDP1A_BACSU	DNA POLYMERASE III, ALPHA CHAIN	BACILLUS SUBTILIS	58-85	417-444	1382-1416						
PDP1A_ECOLI	DNA POLYMERASE III, ALPHA CHAIN	ESCHERICHIA COLI	77-104								
PDP1A_SACER	DNA POLYMERASE III, ALPHA CHAIN	SACCHAROPOLYSPORA ERYTHRAEA	230-257								

PECGENE	107x17bt4	Prokaryotic Sequences									
GENE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA3	AREA3	AREA2	AREA2	AREA2
PDP1A_SALTY	DNA POLYMERASE III, ALPHA CHAIN	SALMONELLA TYPHIMURIUM	77-104								
PDP1B_BACSU	DNA POLYMERASE III, BETA CHAIN	BACILLUS SUBTILIS	212-239								
PDP1B_BORBU	DNA POLYMERASE III, BETA CHAIN	BORRELIA BURGDORFERI	266-313								
PDP1B_BUCAP	DNA POLYMERASE III, BETA CHAIN	BUCHNERA APHIDICOLA	31-62	308-339							
PDP1B_MICLU	DNA POLYMERASE III, BETA CHAIN	MICROCOCCUS LUTEUS	191-218								
PDP1B_MYCCA	DNA POLYMERASE III, BETA CHAIN	MYCOPLASMA CAPRICOLUM	36-70								
PDP1B_PSEPU	DNA POLYMERASE III, BETA CHAIN	PSEUDOMONAS PUTIDA	30-60								
PDP1B_SPICI	DNA POLYMERASE III, BETA CHAIN	SPIROPLASMA CITRI	78-112	139-177	273-310						
PDP1X_BACSU	DNA POLYMERASE III SUBUNITS GAMMA AND TAU	BACILLUS SUBTILIS	231-272								
PDPC1_ECOLI	DNA PRIMASE TRAC-1	ESCHERICHIA COLI	691-743								
PDPC1_ECOLI	DNA PRIMASE TRAC-1	ESCHERICHIA COLI	401-448								
PDPND_STRPN	DPND PROTEIN	STREPTOCOCCUS PNEUMONIAE	79-120								
PDPO1_BACCA	DNA POLYMERASE I	BACILLUS CALDOTENAX	208-235								
PDPO1_STRPN	DNA POLYMERASE I	STREPTOCOCCUS PNEUMONIAE	198-225	398-435	571-598	645-672					
PDPO1_THEAQ	DNA POLYMERASE	THERMUS AQUATICUS	196-223	602-629							
PDPO1_THEFL	DNA POLYMERASE	THERMUS AQUATICUS	597-628								
PDPO2_ECOLI	DNA POLYMERASE II	ESCHERICHIA COLI	569-596								
PDPOL_PYNFU	DNA POLYMERASE	PYROCOCCUS FURIOSUS	746-773								
PDPOL_SULSO	DNA POLYMERASE	SULFOLOBUS SOLFATARICUS	379-406	436-463	615-639	747-774					
PDPOL_THELI	DNA POLYMERASE	THERMOCOCCUS LITORALIS	332-370	551-589	892-926	1004-1031	1153-1194				
PDPP_LACLA	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPP_LACLC	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPS_ECOLI	DNA PROTECTION DURING STARVATION PROTEIN	ESCHERICHIA COLI	4-45								
PDRNI_STREQ	DEOXYRIBONUCLEASE PRECURSOR	STREPTOCOCCUS EQUISIMILIS	33-60	291-318							
PDRRA_STRPE	DAUNORUBICIN RESISTANCE ATP-BINDING PROTEI	STREPTOMYCES PEUCETIUS	286-313								
PDYRA_STAAU	DIHYDROFOLATE REDUCTASE TYPE I	STAPHYLOCOCCUS AUREUS	62-89								
PE13B_BACCI	GLUCAN ENDO-1,3-BETA-GLUCOSIDASE A1 PREC	BACILLUS CIRCULANS	134-161	305-339	424-451						
PEAE_ECOLI	ATTACHING AND EFFACING PROTEIN	ESCHERICHIA COLI	66-100	138-185	525-552	691-725	802-836	871-905			
PEBGR_ECOLI	EBG OPERON REPRESSOR PROTEIN	ESCHERICHIA COLI	151-178								
PEBR_STAAU	ETHIDIUM BROMIDE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	68-98								
PECHR_RHOCA	ENOYL-COA HYDRATASE HOMOLOG	RHODOBACTER CAPSULATUS	222-249								
PECPD_ECOLI	CHAPERONE PROTEIN ECPD PRECURSOR	ESCHERICHIA COLI	20-47								
PEDD_ZYMMO	PHOSPHOGLUCONATE DEHYDRATASE	ZYMOMONAS MOBILIS	12-39	119-146							
PEDIN_STAAU	EPIDERMAL CELL DIF INH PRECURSOR	STAPHYLOCOCCUS AUREUS	52-79								
PEF1_DESMO	ELONGATION FACTOR 2	DESULFUROCOCCUS MOBILIS	427-461								
PEF2_HALHA	ELONGATION FACTOR 2	HALOBACTERIUM HALOBIUM	186-213								
PEF2_METVA	ELONGATION FACTOR 2	METHANOCOCCUS VANNIELII	409-436								
PEF2_SULAC	ELONGATION FACTOR 2	SULFOLOBUS ACIDOCALDARIUS	38-65	145-180							
PEF2_THEAC	ELONGATION FACTOR 2	THERMOPLASMA ACIDOPHILUM	13-40	48-76	220-247						
PEFG_ANANI	ELONGATION FACTOR G	ANACYSTIS NIDULANS	333-359								
PEFG_ECOLI	ELONGATION FACTOR G	ESCHERICHIA COLI	234-261								
PEFG_MYCLE	ELONGATION FACTOR G	MYCOBACTERIUM LEPRAE	211-239	330-357							
PEFG_SALTY	ELONGATION FACTOR G	SALMONELLA TYPHIMURIUM	234-261								
PEFG_SPIPL	ELONGATION FACTOR G	SPIRULINA PLATENSIS	334-374	481-511							
PEFG_SYNY3	ELONGATION FACTOR G	SYNECHOCYSTIS SP	14-41								
PEFT1_STRLA	ELONGATION FACTOR TU1	STREPTOMYCES RANOCISSIMUS	221-258								
PEFT2_STRLA	ELONGATION FACTOR TU2	STREPTOMYCES RANOCISSIMUS	221-258								
PEFTU_STRLA	ELONGATION FACTOR TU	STREPTOMYCES RANOCISSIMUS	228-255								
PEFTS_ECOLI	ELONGATION FACTOR EF-TS	ESCHERICHIA COLI	101-135								
PEFTS_SPICI	ELONGATION FACTOR EF-TS	SPIROPLASMA CITRI	27-54	114-161							
PEFTU_BACTR	ELONGATION FACTOR TU	BACTEROIDES FRAGILIS	18-45	229-256							
PEFTU_BACSU	ELONGATION FACTOR TU	BACILLUS SUBTILIS	11-45	230-257							
PEFTU_BURCE	ELONGATION FACTOR TU	BURKHOLDERIA CEPACIA	26-53								
PEFTU_CHLTR	ELONGATION FACTOR TU	CHLAMYDIA TRACHOMATIS	218-245								
PEFTU_DEISP	ELONGATION FACTOR TU	DEINONEMA SP	230-257								
PEFTU_FLESI	ELONGATION FACTOR TU	FLEXISTIPES SINUSARABICI	221-248								
PEFTU_HALMA	ELONGATION FACTOR TU	HALOARCULA MARISMORTUI	4-31								

PCGENE	10:1178:4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PEFTU_MICLU	ELONGATION FACTOR TU	MICROCOCCUS LUTEUS	221-248								
PEFTU_MYCHO	ELONGATION FACTOR TU	MYCOPLASMA HOMINIS	222-249								
PEFTU_MYCLE	ELONGATION FACTOR TU	MYCOBACTERIUM LEPRAE	220-247								
PEFTU_MYCTU	ELONGATION FACTOR TU	MYCOBACTERIUM TUBERCULOSIS	220-247								
PEFTU_SHEPU	ELONGATION FACTOR TU	SHEWANELLA PUTREFACIENS	28-53								
PEFTU_STRGR	ELONGATION FACTOR TU	STREPTOCOCCUS GRACILIS	233-259								
PELAS_PSEAE	PSEUDOLYSIN PRECURSOR	PSEUDOMONAS AERUGINOSA	141-168								
PELTI_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	78-105								
PELTI_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	74-106								
PELTB_CLOPE	T-LABILE ENTEROTOXIN B CHAIN PRECURSOR	CLOSTRIDIUM PERFRINGENS	228-269								
PENTD_ECOLI	ENTEROBACTIN SYNTHETASE COMPONENT D	ESCHERICHIA COLI	154-188								
PENVM_SALTY	ENVM PROTEIN	SALMONELLA TYPHIMURIUM	34-61								
PEPIB_STAEP	117 KD MEMBRANE ASSOCIATED PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	51-80	125-329	390-325	387-421	857-889				
PEPIC_STAEP	EPIDERMIN BIOSYNTHESIS PROTEIN EPIC	STAPHYLOCOCCUS EPIDERMIDIS	411-447								
PEPIP_STAEP	SERINE PROTEASE EPIP PRECURSOR	STAPHYLOCOCCUS EPIDERMIDIS	2-58	297-324							
PEPIY_STAEP	HYPOTHETICAL 10.7 KD PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	70-101								
PEPIZ_STAEP	HYPOTHETICAL PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	42-100								
PERA_ECOLI	GTP-BINDING ERA PROTEIN	ESCHERICHIA COLI	18-45								
PERBS_BACEA	SENSORY TRANSDUCTION PROTEIN ERYC1	SACCHAROPOLYSPORA ERYTHRAEA	209-243								
PEREA_ECOLI	ERYTHROMYCIN ESTERASE TYPE I	ESCHERICHIA COLI	37-64	143-170							
PERYI_BACEA	ERYTHRONOLIDE SYNTHASE, MODULES 5 AND 6	SACCHAROPOLYSPORA ERYTHRAEA	9-36	967-994	1117-1144						
PESTA_STRSC	ESTERASE PRECURSOR	STREPTOMYCES SCABIES	128-155								
PESTB_PSEFL	ARYLESTERASE	PSEUDOMONAS FLUORESCENS	162-189								
PETC1_STAAU	ENTEROTOXIN TYPE C1 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206							
PETC2_STAAU	ENTEROTOXIN TYPE C2 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206							
PETC3_STAAU	ENTEROTOXIN TYPE C3 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206							
PETXA_STAAU	ENTEROTOXIN TYPE A PRECURSOR	STAPHYLOCOCCUS AUREUS	28-69	165-192							
PETXB_CLOPE	EPSILON-TOXIN, TYPE B PRECURSOR	CLOSTRIDIUM PERFRINGENS	209-236								
PETXB_STAAU	ENTEROTOXIN TYPE B PRECURSOR	STAPHYLOCOCCUS AUREUS	64-101	173-207							
PETXD_STAAU	ENTEROTOXIN TYPE D PRECURSOR	STAPHYLOCOCCUS AUREUS	153-200								
PETXE_STAAU	ENTEROTOXIN TYPE E PRECURSOR	STAPHYLOCOCCUS AUREUS	28-69	88-115							
PEUTC_SALTY	ETHANOLAMINE AMMONIA-LYASE LIGHT CHAIN	SALMONELLA TYPHIMURIUM	116-150								
PEVGA_ECOLI	PUTATIVE TRANSCRIPTION REG EVGA	ESCHERICHIA COLI	62-89								
PEVGS_ECOLI	PUTATIVE SENSOR PROTEIN EVGS	ESCHERICHIA COLI	45-79	249-276	431-458	526-553	829-856				
PEXSB_ECOLI	EXODEOXYRIBONUCLEASE V	ESCHERICHIA COLI	226-253								
PEXSB_ECOLI	EXODEOXYRIBONUCLEASE V	ESCHERICHIA COLI	80-107								
PEXTB_RHDME	BIOPOLYMER TRANSPORT EXBB PROTEIN	RHIZOBIUM MELILOTI	180-207								
PEXOA_STRPN	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOA	STREPTOCOCCUS PNEUMONIAE	218-254								
PEXOF_RHDME	EXOF PROTEIN	RHIZOBIUM MELILOTI	236-270	327-361							
PEXOH_RHDME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOH	RHIZOBIUM MELILOTI	232-279								
PEXOP_RHDME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOP	RHIZOBIUM MELILOTI	211-242	272-299	350-391						
PFADB_ECOLI	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	ESCHERICHIA COLI	36-63	177-204							
PFADL_ECOLI	FATTY ACID TRANSPORT PROTEIN PRECURSOR	ESCHERICHIA COLI	220-247								
PFAED_ECOLI	OUTER MEMBRANE PROTEIN FAED PRECURSOR	ESCHERICHIA COLI	223-257	421-453	507-541						
PFAEF_ECOLI	K88 MINOR FIMBRIAL SUBUNIT PRECURSOR	ESCHERICHIA COLI	18-48								
PFAND_ECOLI	FAND PROTEIN PRECURSOR	ESCHERICHIA COLI	160-194	386-423	598-623	710-757					
PFANE_ECOLI	CHAPERONE PROTEIN FANE PRECURSOR	ESCHERICHIA COLI	22-58								
PFANG_ECOLI	FANG PROTEIN PRECURSOR	ESCHERICHIA COLI	104-131								
PFANH_ECOLI	FANH PROTEIN PRECURSOR	ESCHERICHIA COLI	83-141								
PFAOB_PSEFR	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	PSEUDOMONAS FRAGI	8-42	295-322							
PFDHD_WOLSU	FDHD PROTEIN	WOLINELLA SUCCINOGENES	64-98								
PFDHF_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	613-640								
PFDH_PSESP	FORMATE DEHYDROGENASE	PSEUDOMONAS SP	48-76	386-393							
PFDNO_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	288-315	323-350	696-730						
PFECA_ECOLI	TRANSPORT PROTEIN FECA PRECURSOR	ESCHERICHIA COLI	511-561								
PFECC_ECOLI	TRANSPORT PROTEIN 1, CYTOSOLIC	ESCHERICHIA COLI	210-237								
PFECI_ECOLI	FECI PROTEIN	ESCHERICHIA COLI	111-138								

PCGENE	1071178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PFEMB_STAAU	POSSIBLE PROTEIN FEMB	STAPHYLOCOCCUS AUREUS	22-56								
PFENR_SYNP2	FERREDOXIN--NADP REDUCTASE	SYNECHOCOCCUS SP	4-31								
PFEPC_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPC	ESCHERICHIA COLI	176-203								
PFEPE_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPE	ESCHERICHIA COLI	182-234	281-308							
PFEPQ_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPQ	ESCHERICHIA COLI	128-155								
PFERH_ANASP	FERREDOXIN, HETEROCYST	ANABAENA SP	2-29								
PFERX_ANASP	FERREDOXIN-LIKE PROTEIN IN NIF REGION	ANABAENA SP	67-94								
PFHAB_BORPE	FILAMENTOUS HEMAGGLUTININ	BORDETELLA PERTUSSIS	1128-1158	1359-1386	2063-2114	2841-2868	3051-3085	3167-3194			
PFHAC_BORPE	HAEMOLYSIN-LIKE PROTEIN FHAC PRECURSOR	BORDETELLA PERTUSSIS	342-369								
PFHLA_ECOLI	FORMATE HYDROGENLYASE TRANSACTIVATOR	ESCHERICHIA COLI	36-63	350-384	401-428						
PFHUA_ECOLI	FERRICHROME-IRON RECEPTOR PRECURSOR	ESCHERICHIA COLI	458-485								
PFHUB_ECOLI	PROTEIN FHUB PRECURSOR	ESCHERICHIA COLI	227-254								
PFHUE_ECOLI	OUTER-MEMBRANE RECEPTOR	ESCHERICHIA COLI	587-614								
PFIB_SPICI	FIBRIL PROTEIN	SPIROPLASMA CITRI	161-195	326-367							
PFIC_ECOLI	CELL FILAMENTATION PROTEIN FIC	ESCHERICHIA COLI	151-178								
PFIC_SALTY	CELL FILAMENTATION PROTEIN FIC	SALMONELLA TYPHIMURIUM	151-178								
PFIMC_BORPE	OUTER MEMBRANE PROTEIN FIMC PRECURSOR	BORDETELLA PERTUSSIS	208-235	540-567	618-645						
PFIMC_ECOLI	CHAPERONE PROTEIN FIMC PRECURSOR	ESCHERICHIA COLI	51-78								
PFIMD_ECOLI	FIMD PROTEIN PRECURSOR	ESCHERICHIA COLI	222-253	458-485	534-561	563-590					
PFIME_ECOLI	TYPE 1 FIMBRIAE REGULATORY PROTEIN FIME	ESCHERICHIA COLI	165-192								
PFIMY_SALTY	FIMBRIAE Y PROTEIN	SALMONELLA TYPHIMURIUM	49-76								
PFIMZ_ECOLI	FIMBRIAE Z PROTEIN	ESCHERICHIA COLI	42-69	162-192	196-230						
PFIMZ_SALTY	FIMBRIAE Z PROTEIN	SALMONELLA TYPHIMURIUM	175-209								
PFINQ_ECOLI	FINQ PROTEIN	ESCHERICHIA COLI	145-172								
PFIRA_RICRI	FIRA PROTEIN	RICKETTSIA RICKETTSII	162-189								
PFIXC_AZOCA	FIXC PROTEIN	AZORHIZOBIUM CAULINODANS	129-156								
PFIXL_AZOCA	SENSOR PROTEIN FIXL	AZORHIZOBIUM CAULINODANS	247-274								
PFIXL_BRAJA	SENSOR PROTEIN FIXL	BRADYRHIZOBIUM JAPONICUM	27-54	253-280							
PFLA1_BORBU	FLAGELLAR FILAMENT 41 KD CORE PROTEIN	BORRELIA BURGDORFERI	8-35	271-298							
PFLA1_HALHA	FLAGELLIN A1 PRECURSOR	HALOBACTERIUM HALOBIUM	63-92	157-184							
PFLA1_METVO	FLAGELLIN B1 PRECURSOR	METHANOCOCCUS VOLTAE	28-73	133-160							
PFLA2_METVO	FLAGELLIN B2 PRECURSOR	METHANOCOCCUS VOLTAE	28-66								
PFLA3_HALHA	FLAGELLIN B1 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63								
PFLA3_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	35-76								
PFLA4_HALHA	FLAGELLIN B2 PRECURSOR	HALOBACTERIUM HALOBIUM	36-90	157-184							
PFLA5_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63	154-181							
PFLA6_BACSU	FLAA LOCUS 22.9 KD PROTEIN	BACILLUS SUBTILIS	73-149	155-186							
PFLAA_CAMCO	FLAGELLIN A	CAMPYLOBACTER COLI	15-42	144-191	497-535						
PFLAA_CAMJE	FLAGELLIN A	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538						
PFLAA_METVO	FLAGELLIN A PRECURSOR	METHANOCOCCUS VOLTAE	28-62								
PFLAA_PSEAE	FLAGELLIN	PSEUDOMONAS AERUGINOSA	3-41	51-88	97-124						
PFLAA_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	181-219	228-265	360-391						
PFLAA_SPIAU	FLAGELLAR FILAMENT PROTEIN PRECURSOR	SPIROCHAETA AURANTIA	162-189								
PFLAA_TREHY	FLAGELLAR FILAMENT PROTEIN PRECURSOR	TREPONEMA HYODYSENTERIAE	55-89	219-285							
PFLAA_TREPA	FLAGELLAR FILAMENT OUTER LAYER PROTEIN	TREPONEMA PALLIDUM	243-270								
PFLAB_CAMCO	FLAGELLIN B	CAMPYLOBACTER COLI	144-191	497-535							
PFLAB_CAMJE	FLAGELLIN B	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538						
PFLAB_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	86-113	177-219	228-255	360-391					
PFLAV_CLOMP	FLAVODOXIN	CLOSTRIDIUM MP	18-52								
PFLAY_CAUCR	REGULATORY PROTEIN FLAY	CAULOBACTER CRESCENTUS	291-318	551-578							
PFLA_BACSU	FLAGELLIN	BACILLUS SUBTILIS	102-129	228-255							
PFLGG_BACSU	FLAGELLAR BASAL-BODY ROD PROTEIN FLGG	BACILLUS SUBTILIS	62-89								
PFLGK_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 1	SALMONELLA TYPHIMURIUM	12-50	333-360	456-540						
PFLGL_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	ESCHERICHIA COLI	61-105	229-266							
PFLGL_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	SALMONELLA TYPHIMURIUM	61-105	229-266							
PFLHD_ECOLI	FLAGELLAR TRANSCRIPTIONAL ACTIVATOR FLHD	ESCHERICHIA COLI	6-33								
PFLIA_PSEAE	FLAGELLAR OPERON RNA POL SIGMA FACTOR	PSEUDOMONAS AERUGINOSA	198-232								

AGENE	107a17Bc4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
GENENAME	PROTEIN	ORGANISM	1-41	186-213	295-329	431-466					
PFLIC_ECOLI	FLAGELLIN	ESCHERICHIA COLI	1-41	186-213	295-329	431-466					
PFLIC_SALCH	FLAGELLIN	SALMONELLA CHOLERAE-SUIS	1-41	34-123	136-198						
PFLIC_SALMU	FLAGELLIN	SALMONELLA MUENCHEN	1-41	34-88	136-177	232-259	272-299	376-403			
PFLIC_SALPA	FLAGELLIN	SALMONELLA PARATYPHI-A	1-41	34-123	136-184						
PFLIC_SALRU	FLAGELLIN	SALMONELLA RUBISLAW	1-41	34-123	136-198						
PFLIC_SALTY	FLAGELLIN	SALMONELLA TYPHIMURIUM	1-41	34-123	136-200						
PFLIC_SERMA	FLAGELLIN	SERRATIA MARCESCENS		15-42	55-89	103-130	137-164	275-321			
PFLJD_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	ESCHERICHIA COLI	32-66	106-133	160-187	216-298	346-445				
PFLJD_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	SALMONELLA TYPHIMURIUM	32-66	106-133	235-299	407-438					
PFLJE_BACSU	FLAG HOOK-BASAL BODY PROTEIN FLIE	BACILLUS SUBTILIS	8-35								
PFLJF_BACSU	FLAGELLAR M-RING PROTEIN	BACILLUS SUBTILIS	337-361	391-418							
PFLJF_CAUCR	FLAGELLAR M-RING PROTEIN	CAULOBACTER CRESCENTUS	24-51	297-324	361-388						
PFLJF_SALTY	FLAGELLAR M-RING PROTEIN	SALMONELLA TYPHIMURIUM	484-539								
PFLJG_BACSU	FLAGELLAR SWITCH PROTEIN FLIG	BACILLUS SUBTILIS	33-62								
PFLJO_ECOLI	FLAGELLAR SWITCH PROTEIN FLIG	ESCHERICHIA COLI	44-71								
PFLJI_BACSU	PROBABLE FLII PROTEIN	BACILLUS SUBTILIS	19-46	105-132							
PFLJJ_BACSU	FLAGELLAR FLII PROTEIN	BACILLUS SUBTILIS	7-37								
PFLJJ_SALTY	FLAGELLAR FLII PROTEIN	SALMONELLA TYPHIMURIUM	73-118								
PFLJK_BACSU	PROBABLE FLIK PROTEIN	BACILLUS SUBTILIS	77-104	117-144							
PFLJL_BACSU	FLIL PROTEIN	BACILLUS SUBTILIS	30-71	78-105	109-136						
PFLJL_ECOLI	FLIL PROTEIN	ESCHERICHIA COLI	105-132								
PFLJL_SALTY	FLIL PROTEIN	SALMONELLA TYPHIMURIUM	101-133								
PFLJM_BACSU	FLIM PROTEIN	BACILLUS SUBTILIS	148-175								
PFLJM_ECOLI	FLIM PROTEIN	ESCHERICHIA COLI	231-278								
PFLJN_CAUCR	FLAGELLAR MOTOR SWITCH PROTEIN	CAULOBACTER CRESCENTUS	56-83								
PFLJS_ECOLI	FLAGELLAR PROTEIN FLIS	ESCHERICHIA COLI	59-86								
PFLJT_SALTY	FLAGELLAR PROTEIN FLIT	SALMONELLA TYPHIMURIUM	9-46	67-106							
PFMI2_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFMIA_ECOLI	TYPE-1 FIMBRIAL PROTEIN, A CHAIN PRECURSOR	ESCHERICHIA COLI	5-32								
PFMIC_ECOLI	TYPE-1 FIMBRIAL PROTEIN, C CHAIN PRECURSOR	ESCHERICHIA COLI	11-38								
PFMI_ACTVI	FIMBRIAL SUBUNIT TYPE 1 PRECURSOR	ACTINOMYCES VISCOSUS	248-282	352-379	417-444						
PFMI9_ECOLI	FIMBRIAL PROTEIN 9477 PRECURSOR	ESCHERICHIA COLI	114-141								
PFMA0_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMA1_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA3_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA7_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMAA_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	123-150								
PFMAF_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-141								
PFMAH_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	95-122								
PFMAJ_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	111-145								
PFMAJ_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	96-123								
PFMCD_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PFMDD_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMDH_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMF1_ECOLI	F17 FIMBRIAL PROTEIN PRECURSOR	ESCHERICHIA COLI	97-124								
PFMHI_NEIDE	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA MENINGITIDIS	70-97								
PFMN2_NEIGO	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA GONORRHOEAE	66-97								
PFMN_MORNO	FIMBRIAL PROTEIN PRECURSOR	MORAXELLA NONLIQUEFACIENS	108-146								
PFMP1_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFMP7_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PFMS1_ECOLI	CS1 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	60-87	112-139							
PFMS3_ECOLI	CS3 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	49-98								
PFN_HAEIN	MAJOR FIMBRIAL SUBUNIT PRECURSOR	HAEMOPHILUS INFLUENZAE	102-129								
PFNBA_STAAU	FIBRONECTIN-BINDING PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	41-83	188-215	311-365	431-458	517-555	652-686	722-756		
PFOLC_ECOLI	FOLYLPOLYGLUTAMATE SYNTHASE	ESCHERICHIA COLI	125-159								
PFOLC_LACCA	FOLYLPOLYGLUTAMATE SYNTHASE	LACTOBACILLUS CASEI	129-156								
PFPO_BACFI	FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE	BACILLUS FIRMUS	133-180								

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PFADA_ECOLI	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	195-422								
PFADA_WOLSU	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	WOLINELLA SUCCINOGENES	8-35	487-514							
PFAZE_MYXXA	GLIDING MOTILITY REGULATORY PROTEIN	MYXOCOCCUS XANTHUS	15-42	478-505							
PFATHS_CLOTH	FORMATE--TETRAHYDROFOLATE LIGASE	CLOSTRIDIUM THERMOACETUM	163-190								
PFTR_METTH	FORMYLTRANSFERASE	METHANOBACTERIUM THERMOAUTOTROPHICU	9-43								
PFTSA_BACSU	CELL DIVISION PROTEIN FTSA	BACILLUS SUBTILIS	76-110								
PFTSA_ECOLI	CELL DIVISION PROTEIN FTSA	ESCHERICHIA COLI	301-338	375-418							
PFTSJ_ECOLI	CELL DIVISION PROTEIN FTSJ	ESCHERICHIA COLI	4-31								
PFTSL_ECOLI	CELL DIVISION PROTEIN FTSL	ESCHERICHIA COLI	61-90								
PFTSN_ECOLI	CELL DIVISION PROTEIN FTSN	ESCHERICHIA COLI	131-188								
PFTSX_ECOLI	CELL DIVISION PROTEIN FTSX	ESCHERICHIA COLI	278-305								
PFTSY_ECOLI	CELL DIVISION PROTEIN FTSY	ESCHERICHIA COLI	230-260								
PFUCR_ECOLI	L-FUCOSE OPERON ACTIVATOR	ESCHERICHIA COLI	7-45								
PFUMA_BACST	FUMARATE HYDRATASE CLASS I, AEROBIC	BACILLUS STEAROTHERMOPHILUS	290-317								
PFUMH_BACSU	FUMARATE HYDRATASE	BACILLUS SUBTILIS	414-445								
PFUR_YERPE	FERRIC UPTAKE REGULATION PROTEIN	YERSINIA PESTIS	99-130								
PGIP1_ECOLI	GLYC 3-PHOS DEHYDROGENASE A	ESCHERICHIA COLI	302-329								
PGIP2_ANAVA	GLYC 3-PHOS DEHYDROGENASE 2	ANABAENA VARIABILIS	87-114								
PGIP3_ANAVA	GLYC 3-PHOS DEHYDROGENASE 3	ANABAENA VARIABILIS	162-189								
PGIP3_ECOLI	GLYC 3-PHOS DEHYDROGENASE C	ESCHERICHIA COLI	236-324								
PGIP_BACME	GLYC 3-PHOS DEHYDROGENASE	BACILLUS MEGATERIUM	49-76	237-271							
PGIP_BACSU	GLYC 3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	49-76								
PGIP_PYRWO	GLYC 3-PHOS DEHYDROGENASE	PYROCOCCUS WOESEI	259-286								
PGIP_THEMA	GLYC 3-PHOS DEHYDROGENASE	THERMOTOGA MARITIMA	290-328								
PGMB_BACST	GLUCOSE-6-PHOSPHATE ISOMERASE B	BACILLUS STEAROTHERMOPHILUS	103-143	241-268							
PGMD_ECOLI	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ESCHERICHIA COLI	301-328								
PGMD_ZYMMO	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ZYMOMONAS MOBILIS	165-192								
PGNCA_PSEFL	CYANIDE CONTROL PROTEIN	PSEUDOMONAS FLUORESCENS	178-205								
PGNLT_SALTY	GALACTOKINASE	SALMONELLA TYPHIMURIUM	86-113								
PGNLT_HAEIN	GAL-1-PHOS URIDYLYLTRANSFERASE	HAEMOPHILUS INFLUENZAE	124-158	239-269							
PGNLT_LACHE	GAL-1-PHOS URIDYLYLTRANSFERASE	LACTOBACILLUS HELVETICUS	304-338								
PGNLT_SALTY	GALACTOSE OPERON REPRESSOR	SALMONELLA TYPHIMURIUM	53-91								
PGNLR_HAEIN	GALACTOSE OPERON REPRESSOR	HAEMOPHILUS INFLUENZAE	182-209								
PGNL_PSEFL	DE D-GALACTOSE 1-DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	251-278								
PGOHD_ECOLI	GTP CYCLOHYDROLASE II	ESCHERICHIA COLI	78-105								
PGOHD_PHOLE	GTP CYCLOHYDROLASE II	PHOTOBACTERIUM LEIOGNATHI	197-227	246-273							
PGCSH_ECOLI	GLYCINE CLEAVAGE SYSTEM H PROTEIN	ESCHERICHIA COLI	10-37								
PGCSP_ECOLI	GLYCINE DEHYDROGENASE	ESCHERICHIA COLI	216-246								
PGCVA_ECOLI	GLYCINE CLEAVAGE SYSTEM TRANSACTIVATOR	ESCHERICHIA COLI	60-94								
PGENK_ECOLI	PROTEIN K	ESCHERICHIA COLI	24-51								
PGER1_BACSU	SPORE GERMINATION PROTEIN 1	BACILLUS SUBTILIS	49-83	182-216	350-384						
PGER2_BACSU	SPORE GERMINATION PROTEIN III PRECURSOR	BACILLUS SUBTILIS	293-323								
PGERE_BACSU	GERMINATION PROTEIN GERE	BACILLUS SUBTILIS	13-40								
PGGI2_STAHA	ANTIBACTERIAL PROTEIN 2	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGGI3_STAHA	ANTIBACTERIAL PROTEIN 3	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGIDA_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN A	BACILLUS SUBTILIS	396-423								
PGIDA_ECOLI	GLUCOSE INHIBITED DIVISION PROTEIN A	ESCHERICHIA COLI	533-568								
PGIDA_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN A	PSEUDOMONAS PUTIDA	539-566								
PGIDB_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN B	BACILLUS SUBTILIS	34-61								
PGIDB_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN B	PSEUDOMONAS PUTIDA	25-52								
PGLCP_SYNY3	GLUCOSE TRANSPORT PROTEIN	SYNECHOCYSTIS SP	288-322								
PGLDA_BACST	GLYCEROL DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	20-79								
PGLGA_ECOLI	GLYCOGEN SYNTHASE	ESCHERICHIA COLI	256-283								
PGLGC_ECOLI	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	ESCHERICHIA COLI	114-141								
PGLGC_SALTY	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	114-141								
PGLMS_ECOLI	GLUC-FRUC-6-PHOSAMINOTRANSFERASE	ESCHERICHIA COLI	209-243								
PGLNI_METTL	GLNB-LIKE PROTEIN 1	METHANOCOCCUS THERMOLITHOTROPHICUS	58-85								

PCGENE	107a178rd	Protuerotic Sequence									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PGLNA_ANASP	GLUTAMINE SYNTHETASE	ANABAENA SP	8-42								
PGLNA_BACSU	GLUTAMINE SYNTHETASE	BACILLUS SUBTILIS	4-31								
PGLNA_CLOAB	GLUTAMINE SYNTHETASE	CLOSTRIDIUM ACETOBUTYLICUM	413-440								
PGLNA_ECOLI	GLUTAMINE SYNTHETASE	ESCHERICHIA COLI	144-171								
PGLNA_METVO	GLUTAMINE SYNTHETASE	METHANOCOCCUS VOLTAE	201-230								
PGLNA_PROVU	GLUTAMINE SYNTHETASE	PROTEUS VULGARIS	142-169								
PGLNA_PYRFU	GLUTAMINE SYNTHETASE	PYROCOCCUS FURIOSUS	391-421								
PGLNA_SALTY	GLUTAMINE SYNTHETASE	SALMONELLA TYPHIMURIUM	144-171								
PGLNA_STRCO	GLUTAMINE SYNTHETASE	STREPTOMYCES COELICOLOR	186-211								
PGLNB_AZOBR	NITROGEN REGULATORY PROTEIN P-II	AZOSPIRILLUM BRASILENSE	13-49								
PGLNB_RHOCA	NITROGEN REGULATORY PROTEIN P-II	RHODOBACTER CAPSULATUS	13-49								
PGLNB_SYNPX	NITROGEN REGULATORY PROTEIN P-II	SYNECHOCOCCUS SP	52-79								
PGLND_ECOLI	UDP URIDYLYLTRANSFERASE	ESCHERICHIA COLI	120-147	151-178							
PGLND_SALTY	UDP URIDYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	151-178								
PGLNE_ECOLI	ADENYLYLTRANSFERASE	ESCHERICHIA COLI	103-130	433-460	763-790						
PGLNH_ECOLI	GLUTAMINE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	126-153								
PGLNQ_BACST	GLUTAMINE PERMEASE OPERON PROTEIN GLNQ	BACILLUS STEAROTHERMOPHILUS	7-34								
PGLPD_BACSU	AEROBIC GLYC-3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	194-220								
PGLPD_ECOLI	AEROBIC GLYC-3-PHOS DEHYDROGENASE	ESCHERICHIA COLI	410-437								
PGLPF_BACSU	GLYCEROL UPTAKE FACILITATOR PROTEIN	BACILLUS SUBTILIS	235-274								
PGLPK_BACSU	GLYCEROL KINASE	BACILLUS SUBTILIS	44-93								
PGLPK_ECOLI	GLYCEROL KINASE	ESCHERICHIA COLI	56-90								
PGLPR_ECOLI	GLYCEROL-3-PHOSPHATE REGULON REPRESSOR	ESCHERICHIA COLI	3-32								
PGLPX_ECOLI	GLPX PROTEIN	ESCHERICHIA COLI	297-324								
PGLPX_SHIFL	GLPX PROTEIN	SHIGELLA FLEXNERI	297-324								
PGLRX_ECOLI	GLUTAREDOXIN	ESCHERICHIA COLI	24-51								
PGLTP_ECOLI	PROTON GLUTAMATE SYMPORT PROTEIN	ESCHERICHIA COLI	482-509								
PGLVB_ECOLI	PHOSPHOTRANSFERASE ENZYME TYPE-IIB	ESCHERICHIA COLI	119-146								
PGLYA_BRAJA	SERINE HYDROXYMETHYLTRANSFERASE	BRADYRHIZOBIUM JAPONICUM	130-157								
PGLYA_CAMJE	SERINE HYDROXYMETHYLTRANSFERASE	CAMPYLOBACTER JEJUNI	29-60								
PGLYA_HYPNE	SERINE HYDROXYMETHYLTRANSFERASE	HYPHOMICROBIUM METHYLOVORUM	376-403								
PGM07_BACSU	CONG OPERON PROTEIN 7	BACILLUS SUBTILIS	28-55								
PGNTK_BACSU	GLUCONOKINASE	BACILLUS SUBTILIS	37-67	88-122							
PGP1D_CHLTR	VIRULENCE PROTEIN PGP1-D	CHLAMYDIA TRACHOMATIS	238-271								
PGP2D_CHLTR	VIRULENCE PROTEIN PGP2-D	CHLAMYDIA TRACHOMATIS	112-153								
PGP3D_CHLTR	VIRULENCE PROTEIN PGP3-D	CHLAMYDIA TRACHOMATIS	97-131								
PGP4D_CHLTR	VIRULENCE PROTEIN PGP4-D	CHLAMYDIA TRACHOMATIS	24-52								
PGP7D_CHLTR	VIRULENCE PROTEIN PGP7-D	CHLAMYDIA TRACHOMATIS	63-106	193-220							
PGP8D_CHLTR	VIRULENCE PROTEIN PGP8-D	CHLAMYDIA TRACHOMATIS	12-40								
PGREA_BACPA	TRANSCRIPTION ELONGATION FACTOR GREA	CHLAMYDIA TRACHOMATIS	94-121								
PGRJR_BACSU	GRPE-LIKE PROTEIN	RICKETTSIA PROWAZEKII	13-49								
PGRJR_BORBU	GRPE-LIKE PROTEIN	BACILLUS SUBTILIS	27-73								
PGRJR_CLOAB	GRPE-LIKE PROTEIN	BORRELIA BURGDORFERI	2-79								
PGRSA_BACBR	GRAMICIDIN S SYNTHETASE	CLOSTRIDIUM ACETOBUTYLICUM	12-83								
PGRSB_BACBR	GRAMICIDIN S SYNTHETASE II	BACILLUS BREVIS	545-572	799-826	840-882	1035-1062					
PGRSB_BACPA	TRANSCRIPTION ELONGATION FACTOR GREA	BACILLUS BREVIS	48-75	94-121	241-282	1126-1153	1213-1240	2162-2189	2539-2586	2819-2848	3606-3633
PGSHI_ECOLI	GLUTAMATE--CYSTEINE LIGASE	ESCHERICHIA COLI	259-286	274-301							
PGSHR_ECOLI	GLUTATHIONE REDUCTASE	ESCHERICHIA COLI	100-134	270-311							
PGSHR_PSEAE	GLUTATHIONE REDUCTASE	PSEUDOMONAS AERUGINOSA	80-114								
PGSIA_BACSU	STARVATION-INDUCIBLE PROTEIN A	BACILLUS SUBTILIS	74-101	265-296							
PGSPD_ERWCA	PROTEIN D PRECURSOR	ERWINIA CAROTOVORA	258-285	316-343	389-419						
PGSPD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	259-302	307-338	531-578	659-686					
PGSPD_KLEPN	PROTEIN D PRECURSOR	KLEBSIELLA PNEUMONIAE	259-286								
PGSPE_ERWCA	PROTEIN E	ERWINIA CAROTOVORA	329-367								
PGSPE_ERWCH	PROTEIN E	ERWINIA CHRYSANTHEMI	329-367								
PGSPE_KLEPN	PROTEIN E	KLEBSIELLA PNEUMONIAE	323-361								
PGSPE_PSEAE	PROTEIN E	PSEUDOMONAS AERUGINOSA	122-149	331-369							

PCGENE	10/21/1784	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA2	AREA2	AREA2	AREA2	AREA2
PGSPF_XANCP	PROTEIN F	XANTHOMONAS CAMPESTRIS	230-257								
PGSPH_PSEAE	PROTEIN H PRECURSOR	PSEUDOMONAS AERUGINOSA	18-59								
PGSPI_AERHY	PROTEIN I PRECURSOR	AEROMONAS HYDROPHILA	27-61								
PGSPI_ERWCA	PROTEIN I PRECURSOR	ERWINIA CAROTOVORA	13-61								
PGSPJ_KLEPN	PROTEIN J PRECURSOR	KLEBSIELLA PNEUMONIAE	140-167								
PGSPK_ERWCA	PROTEIN K	ERWINIA CAROTOVORA	28-55								
PGSPK_ERWCH	PROTEIN K	ERWINIA CHRYSANTHEMI	28-55								
PGSPK_KLEPN	PROTEIN K	KLEBSIELLA PNEUMONIAE	72-99								
PGSPK_PSEAE	PROTEIN K	PSEUDOMONAS AERUGINOSA	262-289								
PGSPL_ERWCH	PROTEIN L	ERWINIA CHRYSANTHEMI	7-42	248-286	331-358						
PGSPL_XANCP	PROTEIN L	XANTHOMONAS CAMPESTRIS	19-71	297-324							
PGSPM_ERWCA	PROTEIN M	ERWINIA CAROTOVORA	108-145								
PGSOD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	259-302	448-475	546-573	637-664					
PGTF1_STRDO	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS DOWNEI	42-69	177-204	212-239	464-491	1382-1416	1495-1529			
PGTF1_STRDO	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS DOWNEI	171-198	206-233	458-485	1382-1412	1497-1524				
PGTFA_STRMU	GLUCOSYLTRANSFERASE-S	STREPTOCOCCUS MUTANS	297-330								
PGTFB_STRMU	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS MUTANS	42-93	110-137	161-188	199-246	313-347	592-627			
PGTFC_STRMU	GLUCOSYLTRANSFERASE-SI PRECURSOR	STREPTOCOCCUS MUTANS	4-40	110-138	235-262	330-361	614-651				
PGTFS_STRDO	GLUCOSYLTRANSFERASE-S PRECURSOR	STREPTOCOCCUS DOWNEI	275-316	436-463	1281-1315						
PGTMR_METTF	POSSIBLE G-T MISMATCHES REPAIR ENZYME	METHANOBACTERIUM THERMOFORMICICUM	80-107	148-175							
PGUAA_BACSU	GMP SYNTHASE	BACILLUS SUBTILIS	314-348	399-436	478-505						
PGUAA_ECOLI	GMP SYNTHASE	ESCHERICHIA COLI	105-132								
PGUB_BACCI	BETA-GLUCANASE PRECURSOR	BACILLUS CIRCULANS	164-191								
PGUB_BACLI	BETA-GLUCANASE PRECURSOR	BACILLUS LICHENIFORMIS	132-166								
PGUB_BACMA	BETA-GLUCANASE PRECURSOR	BACILLUS MACERANS	126-160								
PGUNI_BACSU	ENDOGLUCANASE A	BACILLUS SP	18-49								
PGUNI_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304	378-403							
PGUNI_BUTFI	ENDOGLUCANASE I	BUTYRIVIBRIO FIBRISOLVENS	154-181	452-495							
PGUN2_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUN2_THEFU	ENDOGLUCANASE E-3 PRECURSOR	THERMONOSPORA FUSCA	201-228								
PGUN3_BACSU	ENDOGLUCANASE C PRECURSOR	BACILLUS SP	110-137	348-378	538-565						
PGUN3_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUN3_FIBSU	ENDOGLUCANASE 3 PRECURSOR	FIBROBACTER SUCCINOGENES	542-586								
PGUN4_THEFU	ENDOGLUCANASE E-4 PRECURSOR	THERMONOSPORA FUSCA	308-342								
PGUN5_THEFU	ENDOGLUCANASE E-5 PRECURSOR	THERMONOSPORA FUSCA	44-71								
PGUNA_BACLA	ENDOGLUCANASE A PRECURSOR	BACILLUS LAUTUS	410-437	454-481							
PGUNA_CLOTH	ENDOGLUCANASE A PRECURSOR	CLOSTRIDIUM THERMOCELLUM	354-384								
PGUNA_PSEFL	ENDOGLUCANASE A PRECURSOR	PSEUDOMONAS FLUORESCENS	762-789								
PGUNA_RUMAL	ENDOGLUCANASE A	RUMINOCOCCUS ALBUS	294-321								
PGUNA_RUMFL	CELLODEXTRINASE A	RUMINOCOCCUS FLAVEFACIENS	276-303								
PGUNB_BACLA	ENDOGLUCANASE B PRECURSOR	BACILLUS LAUTUS	375-450								
PGUNB_CALSA	ENDOGLUCANASE B	CALDOCELLUM SACCHAROLYTICUM	151-182	444-478							
PGUNB_CELFI	ENDOGLUCANASE B PRECURSOR	CELLULOMONAS FIMI	266-293								
PGUNB_CLOCL	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM CELLULOVORANS	144-171	266-300							
PGUNB_CLOTH	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM THERMOCELLUM	514-541								
PGUNC_CELFI	ENDOGLUCANASE C PRECURSOR	CELLULOMONAS FIMI	881-908								
PGUNC_PSEFL	ENDOGLUCANASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	32-82								
PGUND_CLOCE	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	382-433								
PGUND_CLOCL	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	145-172	271-298							
PGUNE_CLOTM	ENDOGLUCANASE E PRECURSOR	CLOSTRIDIUM THERMOCELLUM	158-185	207-234	284-311						
PGUNH_CLOTM	ENDOGLUCANASE H PRECURSOR	CLOSTRIDIUM THERMOCELLUM	46-73	423-452							
PGUNS_ERWCA	ENDOGLUCANASE PRECURSOR	ERWINIA CAROTOVORA	20-47	115-149							
PGUNX_CLOTM	PUTATIVE ENDOGLUCANASE X	CLOSTRIDIUM THERMOCELLUM	103-139								
PGUNZ_CLOSR	ENDOGLUCANASE Z PRECURSOR	CLOSTRIDIUM STERCORARIUM	296-326	522-549							
PGUN_BACPO	ENDOGLUCANASE	BACILLUS POLYMYXA	198-225								
PGUN_BACSI	ENDOGLUCANASE PRECURSOR	BACILLUS SP	321-348								
PGUN_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SP	198-229	501-528	623-664						

PGCGENE	10Jul13z4	Prokaryotic Sequences									
CLE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PGVTD_ECOLI	SORBITOL-6-PHOSPHATE 2-DEHYDROGENASE	ESCHERICHIA COLI	118-165								
PGVPI_HALHA	GAS VESICLE PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	36-63								
PGVPI_HALHA	GAS VESICLE PROTEIN, CHROMOSOMAL	HALOBACTERIUM HALOBIUM	36-63								
PGVPA_APHFL	GAS VESICLE PROTEIN	APHANIZOMENON FLOS-AQUAE	4-31	39-66							
PGVPA_FREDI	GAS VESICLE PROTEIN	FREMYELLA DIPLOSIPHON	4-31	39-66							
PGVPA_HALME	GAS VESICLE PROTEIN	HALOBACTERIUM MEDITERRANEI	37-64								
PGVPA_MICBC	GAS VESICLE PROTEIN	MICROCYSTIS SP	39-66								
PGVPA_PSEAN	GAS VESICLE PROTEIN	PSEUDOANABAENA SP	4-31	39-66							
PGVPC_APHFL	GAS VESICLE PROTEIN C	APHANIZOMENON FLOS-AQUAE	8-49								
PGVPC_HALHA	GAS VESICLE PROTEIN C	HALOBACTERIUM HALOBIUM	150-249								
PGVPC_HALME	GAS VESICLE PROTEIN C	HALOBACTERIUM MEDITERRANEI	139-169								
PGVPD_HALHA	GVPD PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	110-147								
PGVPD_HALME	GVPD PROTEIN	HALOBACTERIUM MEDITERRANEI	110-147								
PGVPF_HALHA	GVPF PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	13-47	135-169							
PGVPF_HALME	GVPF PROTEIN	HALOBACTERIUM MEDITERRANEI	13-47								
PGVPF_HALSA	GVPF PROTEIN	HALOBACTERIUM SALINARIUM	8-49								
PGVPG_HALHA	GVPG PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	18-65								
PGVPG_HALME	GVPG PROTEIN	HALOBACTERIUM MEDITERRANEI	38-72								
PGVPH_HALHA	GVPH PROTEIN	HALOBACTERIUM HALOBIUM	10-40								
PGVPI_HALME	GVPI PROTEIN	HALOBACTERIUM MEDITERRANEI	5-32								
PGVPK_HALHA	GVPK PROTEIN	HALOBACTERIUM HALOBIUM	45-76								
PGVPK_HALME	GVPK PROTEIN	HALOBACTERIUM MEDITERRANEI	12-39	47-74							
PGVPK_HALSA	GVPK PROTEIN	HALOBACTERIUM SALINARIUM	11-38	50-77							
PGVPL_HALME	GVPL PROTEIN	HALOBACTERIUM MEDITERRANEI	44-78								
PGVPN_HALHA	GVPN PROTEIN	HALOBACTERIUM HALOBIUM	113-140								
PGVPN_HALME	GVPN PROTEIN	HALOBACTERIUM MEDITERRANEI	15-56								
PGVPO_HALME	GVPO PROTEIN	HALOBACTERIUM MEDITERRANEI	69-96	105-132							
PGYRA_BACSU	DNA GYRASE SUBUNIT A	BACILLUS SUBTILIS	380-407	429-499							
PGYRA_CAMJE	DNA GYRASE SUBUNIT A	CAMPYLOBACTER JEJUNI	267-310	381-408	432-479	665-695					
PGYRA_ECOLI	DNA GYRASE SUBUNIT A	ESCHERICHIA COLI	266-293	449-497							
PGYRA_KLEPN	DNA GYRASE SUBUNIT A	KLEBSIELLA PNEUMONIAE	266-293	448-496	518-545						
PGYRA_MYCPN	DNA GYRASE SUBUNIT A	MYCOPLASMA PNEUMONIAE	4-31								
PGYRA_STAAU	DNA GYRASE SUBUNIT A	STAPHYLOCOCCUS AUREUS	129-156	346-371	430-479	647-674	812-839				
PGYRB_BACSU	DNA GYRASE SUBUNIT B	BACILLUS SUBTILIS	198-239								
PGYRB_BORBU	DNA GYRASE SUBUNIT B	BORRELIA BURGDORFERI	154-181								
PGYRB_ECOLI	DNA GYRASE SUBUNIT B	ESCHERICHIA COLI	610-643								
PGYRB_HALSQ	DNA GYRASE SUBUNIT B	HALOFERAX SP	230-257								
PGYRB_MYCPN	DNA GYRASE SUBUNIT B	MYCOPLASMA PNEUMONIAE	249-283								
PGYRB_NEIGO	DNA GYRASE SUBUNIT B	NEISSERIA GONORRHOEAE	524-558	618-645							
PGYRB_PSEPU	DNA GYRASE SUBUNIT B	PSEUDOMONAS PUTIDA	122-149	684-711							
PGYRB_SPICI	DNA GYRASE SUBUNIT B	SPIROPLASMA CITRI	40-74	189-238	283-310	341-368	540-579				
PGYRB_STAAU	DNA GYRASE SUBUNIT B	STAPHYLOCOCCUS AUREUS	252-279	291-318							
PHDHA_ECOLI	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	ESCHERICHIA COLI	71-98								
PHEL_ECOLI	HELICASE IV	ESCHERICHIA COLI	100-134	539-556							
PHEM_HAEIN	LIPOPROTEIN E PRECURSOR	HAEMOPHILUS INFLUENZAE	58-85								
PHEM1_CHLVI	GLUTAMYL-TRNA REDUCTASE	CHLOROBIUM VIBRIOFORMES	232-259								
PHEM1_ECOLI	GLUTAMYL-TRNA REDUCTASE	ESCHERICHIA COLI	289-316								
PHEM1_RHOSH	5-AMINOLEVULINIC ACID SYNTHASE	RHODOBACTER SPHAEROIDES	73-100								
PHEM1_SALTY	GLUTAMYL-TRNA REDUCTASE (	SALMONELLA TYPHIMURIUM	289-316	344-371							
PHEM1_SYNY3	GLUTAMYL-TRNA REDUCTASE	SYNECHOCYSTIS SP	163-190	330-377							
PHEM2_METSC	DELTA-AMINOLEVULINIC ACID DEHYDRATASE	METHANOTHERMUS SOCIABILIS	131-158								
PHEM4_BACSU	PUTATIVE UROPORPHYRINOGEN-III SYNTHASE	BACILLUS SUBTILIS	10-37								
PHEM4_ECOLI	UROPORPHYRINOGEN-III SYNTHASE	ESCHERICHIA COLI	211-238								
PHEMR_YEREN	HEMIN RECEPTOR PRECURSOR	YERSINIA ENTEROCOLITICA	147-174								
PHEMX_ECOLI	PUTATIVE METHYLTRANSFERASE	ESCHERICHIA COLI	234-261								
PHEMY_BACSU	HEMY PROTEIN	BACILLUS SUBTILIS	69-138	185-219							
			217-262								

PCGENE	10?s11?s:4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PHEM2_BACSU	FERROCHELATASE	BACILLUS SUBTILIS	199-226								
PHETA_ANASP	HETEROCYST DIFFERENTIATION PROTEIN	ANABAENA SP	184-211	357-398	521-565						
PHEXA_STRPN	DNA MISMATCH REPAIR PROTEIN HEXA	STREPTOCOCCUS PNEUMONIAE	436-460								
PHEXB_STRPN	DNA MISMATCH REPAIR PROTEIN HEXB	STREPTOCOCCUS PNEUMONIAE	470-497								
PHFAB_CAUCR	POS TRANSACTIVATOR PROTEIN HFAB	CAULOBACTER CRESCENTUS	98-125								
PHFLC_ECOLI	HFLC PROTEIN	ESCHERICHIA COLI	113-140								
PHFLX_ECOLI	GTP-BINDING PROTEIN HFLX	ESCHERICHIA COLI	169-196								
PHIFQ_ECOLI	HOST FACTOR-I PROTEIN	ESCHERICHIA COLI	24-51								
PHIFC_HAEIN	PILIATION PROTEIN HIFC PRECURSOR	HAEMOPHILUS INFLUENZAE	356-383	404-431	447-474						
PHIS1_LACLA	PHOSPHORIBOSYL-AMP CYCLOHYDROLASE	LACTOCOCCUS LACTIS	126-174								
PHIS4_ECOLI	P-5-A CARBOXAMIDE RIBOTIDE	ESCHERICHIA COLI	125-159								
PHIS4_LACLA	P-5-A CARBOXAMIDE RIBOTIDE	LACTOCOCCUS LACTIS	49-89	181-228							
PHIS4_METVA	P-5-A CARBOXAMIDE RIBOTIDE	METHANOCOCCUS VANNIELII	115-142								
PHIS4_SALTY	P-5-A CARBOXAMIDE RIBOTIDE	SALMONELLA TYPHIMURIUM	125-159								
PHIS5_LACLA	AMIDOTRANSFERASE HISH	LACTOCOCCUS LACTIS	7-34								
PHIS6_ECOLI	HISF PROTEIN	ESCHERICHIA COLI	39-66	142-169							
PHIS6_SALTY	HISF PROTEIN	SALMONELLA TYPHIMURIUM	39-66	142-169							
PHIS7_ECOLI	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	ESCHERICHIA COLI	168-199								
PHIS7_SALTY	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	SALMONELLA TYPHIMURIUM	161-199								
PHIS8_ECOLI	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	ESCHERICHIA COLI	290-317								
PHIS8_HALVO	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	HALOBACTERIUM VOLCANII	174-201								
PHIS8_LACLA	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	LACTOCOCCUS LACTIS	161-188								
PHIS8_SALTY	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	SALMONELLA TYPHIMURIUM	293-320								
PHISQ_SALTY	HISTIDINE PERMEASE MEMBRANE Q PROTEIN	SALMONELLA TYPHIMURIUM	8-35								
PHISX_ECOLI	HISTIDINOL DEHYDROGENASE	ESCHERICHIA COLI	393-434								
PHISX_LACLA	HISTIDINOL DEHYDROGENASE	LACTOCOCCUS LACTIS	19-46	264-303							
PHISX_MYCSM	HISTIDINOL DEHYDROGENASE	MYCOBACTERIUM SMEGMATIS	288-329	399-430							
PHISX_SALTY	HISTIDINOL DEHYDROGENASE	SALMONELLA TYPHIMURIUM	393-434								
PHLA_STAAU	ALPHA-HEMOLYSIN PRECURSOR	STAPHYLOCOCCUS AUREUS	69-103								
PHLY1_ECOLI	HEMOLYSIN A, CHROMOSOMAL	ESCHERICHIA COLI	5-32	76-103	161-224	234-261	353-380	458-492	554-581	642-728	
PHLY2_ECOLI	HAEMOLYSIN SECRETION PROTEIN, CHROMOSOMAL	ESCHERICHIA COLI	487-514								
PHLY4_ACTPL	HEMOLYSIN D, CHROMOSOMAL	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLYA_ACTPL	HEMOLYSIN	ACTINOBACILLUS PLEUROPNEUMONIAE	5-39	136-170	184-218	273-300	350-377	459-527	846-924		
PHLYA_ACTSU	HEMOLYSIN	ACTINOBACILLUS SUIS	5-39	136-170	184-218	273-300	350-377	459-500	846-924		
PHLYA_ECOLI	HEMOLYSIN A, PLASMID	ESCHERICHIA COLI	5-32	76-103	161-262	334-381	452-493	555-582	643-729		
PHLYA_PROMI	HEMOLYSIN PRECURSOR	PROTEUS MIRABILIS	163-196	299-338	336-400	423-471	498-525	528-576	610-695	705-742	747-774
			789-823	841-868	966-993	1113-1140	1166-1193	1225-1273	1301-1342	1391-1461	1483-1527
PHLYA_SERMA	HEMOLYSIN PRECURSOR	SERRATIA MARCESCENS	311-345	477-504	558-585	623-703	718-745	830-864	1081-1108	1155-1202	1249-1286
			1516-1551								
PHLYB_VIBCH	HEMOLYSIN PRECURSOR	VIBRIO CHOLERAE	335-369	638-665							
PHLYB_ACTPL	HAEMOLYSIN SECRETION PROTEIN	ACTINOBACILLUS PLEUROPNEUMONIAE	34-61								
PHLYB_ECOLI	HAEMOLYSIN SECRETION PROTEIN, PLASMID	ESCHERICHIA COLI	487-514								
PHLYB_PROMI	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	PROTEUS MIRABILIS	16-64	498-547							
PHLYB_PROVU	HAEMOLYSIN SECRETION PROTEIN	PROTEUS VULGARIS	34-68	487-514							
PHLYB_SERMA	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	SERRATIA MARCESCENS	110-137								
PHLYB_VIBCH	HEMOLYSIN SECRETION PROTEIN PRECURSOR	VIBRIO CHOLERAE	335-398	413-447	458-524						
PHLYC_ACTPL	HEMOLYSIN C	ACTINOBACILLUS PLEUROPNEUMONIAE	130-157								
PHLYD_ACTPL	HEMOLYSIN SECRETION PROTEIN APPD	ACTINOBACILLUS PLEUROPNEUMONIAE	191-331								
PHLYD_ECOLI	HEMOLYSIN D, PLASMID	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLY_HALLI7	HALOLYSIN PRECURSOR	HALOPHILIC BACTERIA STRAIN 172P1	484-516								
PHMC1_DESVH	4?1?KD PROTEIN IN MMC OPERON	DESULFOVIBRIO VULGARIS	156-186								
PHMD_METKA	HCP-FORMING DEHYDROGENASE	METHANOPYRUS KANDLERI	36-63								
PHNS_SERMA	DNA-BINDING PROTEIN H-NS	SERRATIA MARCESCENS	35-62								
PHOLA_ECOLI	DNA POLYMERASE III, DELTA SUBUNIT	ESCHERICHIA COLI	94-121	288-322							
PHOXA_BRAJA	REQ PROTEIN HOXA	BRADYRHIZOBIUM JAPONICUM	113-163	444-471							
PHOXB_NOCOP	HOXB ALPHA SUBUNIT	NOCARDIA OPACA	4-31								
PHOXQ_ALCEU	HOXQ PROTEIN	ALCALIGENES EUTROPHUS	76-110								

PCGENE	107x17b.t	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PHOX_BRAJA	HOXX PROTEIN	BRADYRHIZOBIUM JAPONICUM	356-383								
PHPI_DEIRA	HEXAGONALLY SURFACE PROTEIN PRECURSOR	DEINOCOCCUS RADIODURANS	585-612								
PHPRT_LACLA	PHOSPHORIBOSYLTRANSFERASE	LACTOCOCCUS LACTIS	3-39	71-105							
PHRDO_STRCO	SIGMA FACTOR HRDD	STREPTOMYCES COELICOLOR	296-323								
PHRPB_BURSO	REGULATORY PROTEIN HRPB	BURKHOLDERIA SOLANACEARUM	371-405								
PHRPH_PSESY	OUTER MEMBRANE PROTEIN HRPH PRECURSOR	PSEUDOMONAS SYRINGAE	102-129	310-344							
PHRPS_PSESH	PROBABLE REGULATORY PROTEIN HRPS	PSEUDOMONAS SYRINGAE	24-51								
PHSII_CLOAB	18 KD HEAT SHOCK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	67-108								
PHST0_HALMA	HEAT SHOCK 70 KD PROTEIN	HALOARCULA MARISMORTUI	522-576								
PHST0_MYCLE	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM LEPRAE	461-488	501-535							
PHST0_MYCPA	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM PARATUBERCULOSIS	460-487								
PHTPG_ECOLI	HEAT SHOCK PROTEIN C62.5	ESCHERICHIA COLI	321-348	482-509							
PHTRA_ECOLI	PROTEASE DO PRECURSOR	ESCHERICHIA COLI	371-400								
PHTRE_ECOLI	HTRE PROTEIN PRECURSOR	ESCHERICHIA COLI	434-484	524-576							
PHTRU_HALHA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM HALOBIUM	413-471	479-506							
PHTRU_HALSA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM SALINARIUM	414-469	417-471	479-506						
PIIUTP_BACSU	IIUT OPERON POSITIVE REGULATORY PROTEIN	BACILLUS SUBTILIS	5-36								
PHYTJ_LACDE	HEL VETICIN J	LACTOBACILLUS HELVETICUS	174-212	206-233							
PHYCA_ECOLI	FORMATE HYDROGENLYASE SUBUNIT 1	ESCHERICHIA COLI	73-100	106-133							
PHYDG_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	ESCHERICHIA COLI	251-278								
PHYDG_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	SALMONELLA TYPHIMURIUM	251-278								
PHYDH_ECOLI	SENSOR PROTEIN HYDH	ESCHERICHIA COLI	312-339	360-387							
PHYUB_PSEIN	HYDOANTOIN UTILIZATION PROTEIN B	PSEUDOMONAS SP	534-581								
PHYUC_PSEIN	HYDOANTOIN UTILIZATION PROTEIN	PSEUDOMONAS SP	6-40	96-123							
PIAAL_PSEES	D-DOOLEACETATE-L-TYSINE LIGASE	PSEUDOMONAS SYRINGAE	133-160	297-331							
PIAP_ECOLI	ALK PHOS ISOZYME CONVERSION PROTEIN	ESCHERICHIA COLI	74-101								
PICEN_ERWAN	ICE NUCLEATION PROTEIN	ERWINIA ANANAS	326-353	423-449	534-561	614-641	662-689	721-748	758-785	854-881	950-977
			1046-1073								
PICEN_ERWHE	ICE NUCLEATION PROTEIN	ERWINIA HERBICOLA	310-337	406-433	534-561	646-673	694-721	838-865	886-913	982-1009	
PICEN_PSEFL	ICE NUCLEATION PROTEIN	PSEUDOMONAS FLUORESCENS	281-308	377-404	423-452	681-708	729-781	793-852			
PICEN_PSESY	ICE NUCLEATION PROTEIN	PSEUDOMONAS SYRINGAE	364-602	772-847	868-895	909-943					
PICEN_XANCT	ICE NUCLEATION PROTEIN	XANTHOMONAS CAMPESTRIS	496-534	555-582	1168-1204	1248-1275					
PICSB_SHIFL	INTERCELLULAR SPREAD PROTEIN	SHIGELLA FLEXNERI	41-105	438-467							
PIF1_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	340-367	681-708							
PIF2_BACSU	INITIATION FACTOR IF-2	BACILLUS SUBTILIS	173-208	394-421							
PIF2_ECOLI	INITIATION FACTOR IF-2	ESCHERICHIA COLI	686-734	835-862							
PIF2_ENTFC	INITIATION FACTOR IF-2	ENTEROCOCCUS FAECIUM	579-627								
PIF2_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	7-34								
PIF2_ECOLI	INITIATION FACTOR IF-2	ESCHERICHIA COLI	27-54	70-97							
PIF3_KLEPN	INITIATION FACTOR IF-3	KLEBSIELLA PNEUMONIAE	27-54	70-97							
PIF3_MYCFE	INITIATION FACTOR IF-3	MYCOPLASMA FERMENTANS	177-211								
PIF3_PROVU	INITIATION FACTOR IF-3	PROTEUS VULGARIS	2-29	70-97							
PIF3_SALTY	INITIATION FACTOR IF-3	SALMONELLA TYPHIMURIUM	27-54	70-97							
PIF3_SERMA	INITIATION FACTOR IF-3	SERRATIA MARCESCENS	19-46	70-97							
PIGA_NEIGO	IGA-SPECIFIC SERINE ENDOPEPTIDASE	NEISSERIA GONORRHOEAE	245-272	287-314	833-860	1024-1058	1377-1404	1483-1531			
PIGDB_STRSP	IGD BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	193-222						
PIGDD_STRSP	IGD BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	193-225	270-297					
PILVH_ECOLI	ACETOLACTATE SYNTHASE	ESCHERICHIA COLI	47-81	120-147							
PILVH_SALTY	ACETOLACTATE SYNTHASE	SALMONELLA TYPHIMURIUM	47-81	120-147							
PILVN_LACLA	ACETOLACTATE SYNTHASE	LACTOCOCCUS LACTIS	20-75								
PIMPB_SALTY	IMPB PROTEIN	SALMONELLA TYPHIMURIUM	185-212								
PINP_ACICA	INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE	ACINETOBACTER CALCOACETICUS	166-193								
PINP_BACSU	E.5'-MONOPHOSPHATE DEHYDROGENASE	BACILLUS SUBTILIS	159-186								
PINA_BACTL	IMMUNE INHIBITOR A PRECURSOR	BACILLUS THURINGIENSIS	103-130	324-358							
PINLA_LISMO	INTERNALIN A	LISTERIA MONOCYTOGENES	106-143	161-188	196-232						
PINLB_LISMO	INTERNALIN B PRECURSOR	LISTERIA MONOCYTOGENES	53-94	166-200	385-415						
PINVA_YEREN	INVASIN	YERSINIA ENTEROCOLITICA	501-535								

PCGENE	107x178x4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PLCND_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCND	LACTOCOCCUS LACTIS	99-126	140-202	231-307					
PLCRD_YEREN	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA ENTEROCOLITICA	122-149	491-518						
PLCRD_YERPE	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA PESTIS	122-149	491-518						
PLCRV_YERPE	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PESTIS	22-49	137-184	240-267					
PLCRV_YERPS	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PSEUDOTUBERCULOSIS	22-49	240-267						
PLCTB_BACCA	LCTB PROTEIN	BACILLUS CALDOTENAX	18-45							
PLCTB_BACST	LCTB PROTEIN	BACILLUS STEAROTHERMOPHILUS	14-45							
PLDHD_LACPL	D-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	31-81							
PLDHP_BACPS	L-LACTATE DEHYDROGENASE P	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-272	279-306					
PLDHX_BACPS	L-LACTATE DEHYDROGENASE X	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-275	279-306					
PLDH_BACME	L-LACTATE DEHYDROGENASE	BACILLUS MEGATERIUM	244-274							
PLDH_BACST	L-LACTATE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	241-268	279-313						
PLDH_BACSU	L-LACTATE DEHYDROGENASE	BACILLUS SUBTILIS	8-42	240-267						
PLDH_BIFLO	L-LACTATE DEHYDROGENASE	BIFIDOBACTERIUM LONGUM	22-49							
PLDH_LACPL	L-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	197-231							
PLDH_LISMO	L-LACTATE DEHYDROGENASE	LISTERIA MONOCYTOGENES	42-69							
PLDH_MYCHY	L-LACTATE DEHYDROGENASE	MYCOPLASMA HYOPNEUMONIAE	276-310							
PLDH_THEAQ	L-LACTATE DEHYDROGENASE	THERMUS AQUATICUS	3-30							
PLEF_BACAN	LETHAL FACTOR PRECURSOR	BACILLUS ANTHRACIS	165-192	304-331	480-514	548-578	619-658	737-764		
PLEPA_PSEFL	LEPA PROTEIN	PSEUDOMONAS FLUORESCENS	23-50							
PLEP_BACSU	SIGNAL PEPTIDASE I	BACILLUS SUBTILIS	3-30							
PLEU1_ECOLI	2-ISOPROPYLMALATE SYNTHASE	ESCHERICHIA COLI	417-464							
PLEU1_LACLA	2-ISOPROPYLMALATE SYNTHASE	LACTOCOCCUS LACTIS	22-49	379-484						
PLEU1_BACCO	3-ISOPROPYLMALATE DEHYDROGENASE	BACILLUS COAGULANS	331-358							
PLEU1_CLOPA	3-ISOPROPYLMALATE DEHYDROGENASE	CLOSTRIDIUM PASTEURIANUM	185-212							
PLEUD_LACLA	3-ISOPROPYLMALATE DEHYDRATASE	LACTOCOCCUS LACTIS	163-190							
PLEVR_BACSU	TRANSCRIPTIONAL REGULATORY PROTEIN LEVR	BACILLUS SUBTILIS	297-324	676-703	744-774	785-812				
PLEXA_ERWCA	LEXA REPRESSOR	ERWINIA CAROTOVORA	146-173							
PLIP1_MORSP	LIPASE 1	MORAXELLA SP	26-53							
PLIP2_MORSP	LIPASE 2	MORAXELLA SP	356-383							
PLIPB_ECOLI	LIPB PROTEIN	ESCHERICHIA COLI	66-93							
PLIP_BURCE	LIPASE PRECURSOR	BURKHOLDERIA CEPACIA	176-203							
PLIP_PSEFL	LIPASE PRECURSOR	PSEUDOMONAS FLUORESCENS	8-35							
PLIP_PSES3	LIPASE PRECURSOR	PSEUDOMONAS SP	176-203							
PLIP_STAAU	LIPASE PRECURSOR	STAPHYLOCOCCUS AUREUS	80-146	512-546						
PLIVB_SALTY	LEUCINE/VAL/THR-BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	193-220							
PLIVC_SALTY	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	195-222							
PLIVE_SALTY	AMINO ACID TRANSPORT PROTEIN LIVE	SALMONELLA TYPHIMURIUM	121-148							
PLIVF_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVF	ESCHERICHIA COLI	23-50							
PLIVJ_CITFR	LEU/ILE/VAL-BINDING PROTEIN PRECURSOR	CITROBACTER FREUNDII	195-222							
PLIVI_ECOLI	LEU/ILE/VAL-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222							
PLIVK_ECOLI	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222							
PLIVM_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVM	ESCHERICHIA COLI	121-148							
PLKTA_ACTAC	LEUKOTOXIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	113-147	173-213	398-443	451-488	593-620	635-711		
PLKTA_PASHA	LEUKOTOXIN	PASTEURELLA HAEMOLYTICA	53-99	179-216	345-372	409-436	453-482	496-530	545-572	811-838	853-926
PLKTB_ACTAC	LEUKOTOXIN SECRETION PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	487-514							
PLKTB_PASHA	LEUKOTOXIN SECRETION PROTEIN	PASTEURELLA HAEMOLYTICA	42-69	78-105	488-515					
PLKTC_ACTAC	LKTC PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	58-85	116-150						
PLKTC_PASHA	LKTC PROTEIN	PASTEURELLA HAEMOLYTICA	123-157							
PLKTD_AGGAC	LKTD PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	116-164	205-242	278-305	364-391				
PLKTD_PASHA	LKTD PROTEIN	PASTEURELLA HAEMOLYTICA	184-289							
PLON_ECOLI	ATP-DEPENDENT PROTEASE LA	ESCHERICHIA COLI	121-148							
PLPXA_RICPU	UDP-N-ACETYLGLUCOSAMINE ACYLTRANSFERASE	RICKETTSIA RICKETTSII	229-256							
PLSPA_ECOLI	LIPOPROTEIN SIGNAL PEPTIDASE	ESCHERICHIA COLI	10-37							
PLSPA_STAAU	LIPOPROTEIN SIGNAL PEPTIDASE	STAPHYLOCOCCUS AUREUS	134-161							
PLUKF_STAAU	LEUKOCIDIN F SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	161-195							
PLUKS_STAAU	LEUKOCIDIN S SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	153-207							

BAD ORIGINAL

PCGENE	1187:1783:4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PDA7_SHOFL	60 KD ANTIGEN	SHIGELLA FLEXNERI	285-312								
PIPAA_SHOFL	76 KD ANTIGEN	SHIGELLA FLEXNERI	95-136	437-475	491-537	598-630					
PIPAB_SHIDY	43 KD MEMBRANE ANTIGEN	SHIGELLA DYSENTERIAE	28-55	71-169	480-507	522-556					
PIPAB_SHIFL	43 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	28-55	71-169	480-507	522-556					
PIPAC_SHIDY	43 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA DYSENTERIAE	21-57	113-161	273-300	324-378					
PIPAC_SHIFL	43 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA FLEXNERI	28-57	113-161	273-300	324-372					
PIPAD_SHIDY	37 KD MEMBRANE ANTIGEN IPAD	SHIGELLA DYSENTERIAE	47-86	291-318							
PIPAD_SHIFL	36 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	47-86	259-286	291-318						
PIPGB_SHIDY	IPGB PROTEIN	SHIGELLA DYSENTERIAE	175-202								
PIPGB_SHIFL	IPGB PROTEIN	SHIGELLA FLEXNERI	175-202								
PIPT_PSEES	ISOPENTENYL TRANSFERASE	PSEUDOMONAS SYRINGAE	53-87	143-173							
PIPYR_ECOLI	INORGANIC PYROPHOSPHATASE	ESCHERICHIA COLI	138-172								
PIRGA_VIBCH	VIRULENCE PROTEIN PRECURSOR	VIBRIO CHOLERAE	212-239	336-377							
PIRGB_VIBCH	VIRULENCE REGULATORY PROTEIN IRGB	VIBRIO CHOLERAE		67-97							
PIRPA_SYNP7	IRON-REGULATED PROTEIN A	SYNECHOCOCCUS SP	167-194								
PISBD_SHIDY	INSERTION ELEMENT ISO-1S1D PROTEIN INSB	SHIGELLA DYSENTERIAE	86-113								
PISBN_SHIDY	INSERTION ELEMENT ISO-1S1N PROTEIN INSB	SHIGELLA DYSENTERIAE	6-37								
PISB_ECOLI	INSERTION ELEMENT IS1 PROTEIN INSB	ESCHERICHIA COLI	122-149								
PISB_SHIFL	INSERTION ELEMENT IS1 PROTEIN INSB	SHIGELLA FLEXNERI	86-113								
PISB_SHISO	INSERTION ELEMENT IS1 PROTEIN INSB	SHIGELLA SONNEI	86-113								
PISP1_BACSU	MAJOR INTRACELLULAR SERINE PROTEASE	BACILLUS SUBTILIS	115-142	197-224	233-280						
PISP_BACPO	INTRACELLULAR SERINE PROTEASE	BACILLUS POLYMYXA	109-143								
PISTA_ECOLI	ISTA PROTEIN	ESCHERICHIA COLI	183-210								
PISTA_SHISO	ISTA PROTEIN	SHIGELLA SONNEI	183-210								
PITUTA_ECOLI	FERRIC AEROBACTIN RECEPTOR PRECURSOR	ESCHERICHIA COLI	186-213	525-552	559-593						
PJAG_BACSU	JAG PROTEIN	BACILLUS SUBTILIS	68-95								
PK6P2_ECOLI	6-PHOSPHOFRUCTOKINASE ISOZYME 2	ESCHERICHIA COLI	143-170								
PKAD_BACSU	ADENYLATE KINASE	BACILLUS SUBTILIS	188-215								
PKAD_LACLA	ADENYLATE KINASE	LACTOCOCCUS LACTIS	186-213								
PKANG_BACSP	KANAMYCIN NUCLEOTIDYLTRANSFERASE	BACILLUS SP	69-96								
PKANJ_STAAU	KANAMYCIN NUCLEOTIDYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	69-96								
PKDGT_ECOLI	2-KETO-3-DEOXYGLUCONATE PERMEASE	ESCHERICHIA COLI	70-97								
PKDGT_ERWCH	2-KETO-3-DEOXYGLUCONATE PERMEASE	ERWINIA CHRYSANTHEMI	138-155								
PKDTA_ECOLI	3-DEOXY-D-MANNO-OCTULOSONIC-ACID TRANS	ESCHERICHIA COLI	369-396								
PKGTP_ECOLI	ALPHA-KETOGLUTARATE PERMEASE	ESCHERICHIA COLI	7-34								
PKGUA_ECOLI	GUANYLATE KINASE	ESCHERICHIA COLI	162-189								
PKHSE_BACSU	HOMOSERINE KINASE	BACILLUS SUBTILIS	49-76								
PKHSE_FREDI	HOMOSERINE KINASE	FREMYELLA DIPLOSIPHON	52-79								
PKKA4_BACCI	AMINOGLYCOSIDE 3'-PHOSPHOTRANSFERASE	BACILLUS CIRCULANS	12-39								
PKORB_ECOLI	KORB TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	228-255								
PKPY1_SPICI	PYRUVATE KINASE	SPIROPLASMA CITRI	112-148								
PKPYK_BACST	PYRUVATE KINASE	BACILLUS STEAROTHERMOPHILUS	311-338								
PLACA_STAAU	ISOMERASE LACA SUBUNIT	STAPHYLOCOCCUS AUREUS	9-64								
PLACA_STRMU	ISOMERASE LACA SUBUNIT	STREPTOCOCCUS MUTANS	28-60								
PLACC_STRMU	TAGATOSE-6-PHOSPHATE KINASE	STREPTOCOCCUS MUTANS	36-83	283-310							
PLACG_LACCA	6-PHOSPHO-BETA-GALACTOSIDASE	LACTOBACILLUS CASEI	290-317								
PLACI_ECOLI	LACTOSE OPERON REPRESSOR	ESCHERICHIA COLI	9-36								
PLACI_KLEPN	LACTOSE OPERON REPRESSOR	KLEBSIELLA PNEUMONIAE	195-229								
PLACR_STAAU	PHOSPHOTRANSFERASE REPRESSOR	STAPHYLOCOCCUS AUREUS	2-29								
PLACR_STRMU	PHOSPHOTRANSFERASE REPRESSOR	STREPTOCOCCUS MUTANS	2-32								
PLACY_LACDE	LACTOSE PERMEASE	LACTOBACILLUS DELBRUECKII	196-230								
PLAFB_VIBPA	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	VIBRIO PARAHAEMOLYTICUS	62-89	388-415							
PLAMB_KLEPN	MALTOPORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	337-364								
PLANU_CLOTM	ENDO-1,3(4)-BETA-GLUCANASE PRECURSOR	CLOSTRIDIUM THERMOCELLUM	132-159								
PLAS1_PSEAE	OMHL SYNTHESIS PROTEIN LAS1	PSEUDOMONAS AERUGINOSA	171-198								
PLCC1_LEUGE	PROBABLE LEUCOCIN A IMMUNITY PROTEIN	LEUCONOSTOC GELIDUM	41-71								
PLCNC_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCNC	LACTOCOCCUS LACTIS	162-189	207-234	388-433						

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PLUXA_KRYAL	ALKANAL MONOOXYGENASE ALPHA CHAIN	KRYPTOPHANARON ALFREDI	190-217								
PLUXB_PHOPO	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM PHOSPHOREUM	188-217	257-291							
PLUXB_VIBHA	ALKANAL MONOOXYGENASE BETA CHAIN	VIBRIO HARVEYI	373-400								
PLUXC_PHOLE	ACYL-COA REDUCTASE	PHOTOBACTERIUM LEIOGNATHI	44-81								
PLUXC_PHOPO	ACYL-COA REDUCTASE	PHOTOBACTERIUM PHOSPHOREUM	54-91								
PLUXC_VIBFI	ACYL-COA REDUCTASE	VIBRIO FISCHERI	16-65								
PLUXC_XENLU	ACYL-COA REDUCTASE	XENORHABDUS LUMINESCENS	39-69								
PLUXD_PHOLE	ACYL TRANSFERASE	PHOTOBACTERIUM LEIOGNATHI	89-119	218-245							
PLUXE_VIBHA	LUCIFERIN-COMPONENT LIGASE	VIBRIO HARVEYI	30-57								
PLUXF_PHOLE	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM LEIOGNATHI	145-172								
PLUXF_PHOPO	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM PHOSPHOREUM	37-85	99-126							
PLUXG_VIBFI	PROBABLE FLAVIN REDUCTASE	VIBRIO FISCHERI	137-168								
PLUXH_VIBHA	LUXH PROTEIN	VIBRIO HARVEYI	96-123								
PLUXI_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-58								
PLUXJ_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-57								
PLUXP_PHOPO	LUMAZINE PROTEIN	PHOTOBACTERIUM PHOSPHOREUM	51-85	162-189							
PLUXR_VIBHA	LUXR REGULATORY PROTEIN	VIBRIO HARVEYI	61-88								
PLXB1_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	268-295								
PLXB2_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	228-255								
PLYB_BACSU	B-ENZYME	BACILLUS SUBTILIS	87-114								
PLYC_CLOAB	AUTOLYTIC LYSOZYME	CLOSTRIDIUM ACETOBUTYLICUM	91-118								
PLYSP_ECOLI	LYSINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	142-176								
PLYTB_BACSU	AMIDASE ENHANCER PRECURSOR	BACILLUS SUBTILIS	55-82	150-177	467-513	555-585					
PLYTB_ECOLI	LYTB PROTEIN	ESCHERICHIA COLI	210-237								
PLYTC_BACSU	AMIDASE PRECURSOR	BACILLUS SUBTILIS	179-213	225-252							
PLYTR_BACSU	MEMBRANE-BOUND PROTEIN LYTR	BACILLUS SUBTILIS	13-64	259-303							
PM12_STRPY	M PROTEIN, SEROTYPE 12 PRECURSOR	STREPTOCOCCUS PYOGENES	46-92	114-156	191-300	305-342	383-417	436-494			
PM24_STRPY	M PROTEIN, SEROTYPE 24 PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	89-128	175-202	245-272	280-313	399-457			
PM49_STRPY	M PROTEIN, SEROTYPE 49 PRECURSOR	STREPTOCOCCUS PYOGENES	12-174	269-327							
PM5_STRPY	M PROTEIN, SEROTYPE 5 PRECURSOR	STREPTOCOCCUS PYOGENES	5-39	56-263	306-333	352-410					
PM6_STRPY	M PROTEIN, SEROTYPE 6 PRECURSOR	STREPTOCOCCUS PYOGENES	12-39	70-282	290-324	343-401					
PMALE_ECOLI	MALTOSE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	20-47								
PMALE_ENTAE	MALTOSE-BINDING PROTEIN PRECURSOR	ENTEROBACTER AEROGENES	20-47								
PMALK_ENTAE	INNER MEMBRANE PROTEIN MALK	ENTEROBACTER AEROGENES	3-30								
PMALT_ECOLI	MALT REGULATORY PROTEIN	ESCHERICHIA COLI	852-879								
PMALX_STRPN	MALX PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	40-67	180-207							
PMANB_BACSM	1,4-BETA-MANNOSIDASE A AND B PREC	BACILLUS SP	410-441								
PMANB_CALSA	B-MANNANASE/ENDOGLUCANASE A PREC	CALDOCELLUM SACCHAROLYTICUM	389-423	592-626	1222-1256	1296-1323					
PMAOX_BACST	MALATE OXIDOREDUCTASE	BACILLUS STEAROTHERMOPHILUS	246-273								
PMARR_ECOLI	ANTIBIOTIC RESISTANCE PROTEIN MARR	ESCHERICHIA COLI	95-122								
PMBEB_ECOLI	MOBILIZATION PROTEIN MBEB	ESCHERICHIA COLI	38-65	100-134							
PMHH_WOLSU	QUINONE-REAC NIFE-HYDROGENASE	WOLINELLA SUCCINOGENES	440-471								
PMCBB_ECOLI	MCBB PROTEIN	ESCHERICHIA COLI	47-74	122-163							
PMCBD_ECOLI	MCBD PROTEIN	ESCHERICHIA COLI	172-206	226-253	306-345						
PMCP1_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN I	ESCHERICHIA COLI	272-299								
PMCP2_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	ESCHERICHIA COLI	258-306								
PMCP2_SALTY	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	SALMONELLA TYPHIMURIUM	258-306								
PMCP3_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN III	ESCHERICHIA COLI	288-315								
PMCP4_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN IV	ESCHERICHIA COLI	111-145	164-191	277-304						
PMCPA_CAUCR	CHEMORECEPTOR MCPA	CAULOBACTER CRESCENTUS	260-287	369-403	516-543						
PMCPC_SALTY	CHEMOTAXIS CITRATE TRANSDUCER	SALMONELLA TYPHIMURIUM	314-348								
PMCPD_ENTAE	CHEMOTAXIS ASPARTATE TRANSDUCER	ENTEROBACTER AEROGENES	275-302								
PMCPS_ENTAE	CHEMOTAXIS SERINE TRANSDUCER	ENTEROBACTER AEROGENES	41-68	158-208	317-351	488-522					
PMCRA_ECOLI	SPECIFIC RESTRICTION ENZYME A	ESCHERICHIA COLI	37-71								
PMCRA_METBA	METHYL-COENZYME M REDUCTASE	METHANOSARCINA BARKERI	375-405								
PMCRA_METVA	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VANNIELII	335-362								
PMCRA_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	336-363								

BAD ORIGINAL

PCGENE	1071178:4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMCRB_METFE	METHYL-COENZYME M REDUCTASE	METHANOTHERMUS FERVIDUS	267-294								
PMCRB_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	247-274								
PMCRC_ECOLI	MCRC PROTEIN	ESCHERICHIA COLI	111-145								
PMCRD_METVO	REDUCTASE OPERON PROTEIN D	METHANOCOCCUS VOLTAE	54-91								
PMDH_ECOLI	MALATE DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PMDH_METFE	MALATE DEHYDROGENASE	METHANOTHERMUS FERVIDUS	54-88								
PMDH_SALTY	MALATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	127-154								
PMDL_ECOLI	MDL PROTEIN	ESCHERICHIA COLI	464-491	684-711	992-1019						
PMDOH_ECOLI	BIOSYNTHESIS PROTEIN MDOH	ESCHERICHIA COLI	119-152								
PMECI_STAEP	METHICILLIN RESIS REG PROTEIN MECI	STAPHYLOCOCCUS	88-122								
		EPIDERMIDIS & AUREUS									
PMECR_STAEP	METHICILLIN RESISTANCE MECRI PROTEIN	STAPHYLOCOCCUS	439-495	546-573							
		EPIDERMIDIS & AUREUS									
PMEMB_METCA	METHANE MONOOXYGENASE COMPONENT A	METHYLOCOCCUS CAPSULATUS	214-248								
PMEMB_METTR	METHANE MONOOXYGENASE COMPONENT A	METHYLOSINUS TRICHOSPORIUM	321-348								
PMEND_ECOLI	SHCHC SYNTHASE	ESCHERICHIA COLI	333-367								
PMER4_STRLI	PROBABLE HG TRANSPORT PROTEIN	STREPTOMYCES LIVIDANS	159-186								
PMERA_BACSR	MERCURIC REDUCTASE	BACILLUS SP	146-180								
PMERA_STAAU	MERCURIC REDUCTASE	STAPHYLOCOCCUS AUREUS	292-347	352-386							
PMERR_STAAU	MERCURIC RESISTANCE OPERON REG PROTEIN	STAPHYLOCOCCUS AUREUS	86-113								
PMETB_ECOLI	CYSTATHIONINE GAMMA-SYNTHASE	ESCHERICHIA COLI	356-383								
PMETC_ECOLI	CYSTATHIONINE BETA-LYASE	ESCHERICHIA COLI	363-390								
PMETC_SALTY	CYSTATHIONINE BETA-LYASE	SALMONELLA TYPHIMURIUM	2-29								
PMETE_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	448-482								
PMETH_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	371-398	642-676							
PMFD_ECOLI	TRANSCRIPTION-REPAIR COUPLING FACTOR	ESCHERICHIA COLI	185-212								
PMGLA_ECOLI	GALACTOSIDE-BINDING PROTEIN	ESCHERICHIA COLI	62-89	312-380							
PMINC_BACSU	SEPTUM SITE-DETERMINING PROTEIN MINC	BACILLUS SUBTILIS	65-122								
PMIOC_ECOLI	MIOC PROTEIN	ESCHERICHIA COLI	102-129								
PMIP_CHLTR	27 KD MEMBRANE PROTEIN PRECURSOR	CHLAMYDIA TRACHOMATIS	41-75								
PMIP_LEGMI	OUTER MEMBRANE PROTEIN MIP PRECURSOR	LEGIONELLA MICDADEI	106-133								
PMLS1_ENTFA	RRNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLS1_STAAU	RRNA ADENINE N-6-METHYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	9-47								
PMLS2_ENTFA	RRNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLSB_BACFR	RRNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMLSB_ECOLI	RRNA ADENINE N-6-METHYLTRANSFERASE	ESCHERICHIA COLI	4-81	120-154							
PMLSB_STRPN	RRNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS PNEUMONIAE	4-81	120-154							
PMLSB_STRSA	RRNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS SANGUIS	4-81	120-154							
PMLSC_BACFR	RRNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMMOD_METC	METHANE MONOOXYGENASE REG PROTEIN B	METHYLOCOCCUS CAPSULATUS	34-64								
PMOAB_ECOLI	MOLYBD COFAC BIOSYN PROTEIN B	ESCHERICHIA COLI	49-76								
PMOBA_THIFE	MOBA PROTEIN	THIOBACILLUS FERROOXIDANS	94-121	251-278							
PMOBC_THIFE	MOBC PROTEIN	THIOBACILLUS FERROOXIDANS	20-47								
PMOBD_THIFE	MOBD PROTEIN	THIOBACILLUS FERROOXIDANS	95-132								
PMOB_ECOLI	MOB PROTEIN	ESCHERICHIA COLI	45-72								
PMOEA_ECOLI	MOLYBDOPTERIN BIOSYNTHESIS MOEA PROTEIN	ESCHERICHIA COLI	243-270								
PMOP1_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN I	CLOSTRIDIUM PASTEURIANUM	26-53								
PMOP2_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN II	CLOSTRIDIUM PASTEURIANUM	26-64								
PMOXY_PARDE	METHANOL UTIL CONT PROTEIN MOXY	PARACOCCUS DENITRIFICANS	200-234	307-334							
PMPEU_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEU	SYNECHOCOCCUS SP	2-36	80-107	198-225						
PMPEV_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEV	SYNECHOCOCCUS SP	2-31	175-216							
PMPRA_ECOLI	MPRA PROTEIN	ESCHERICHIA COLI	136-163								
PMRAY_BACSU	PENTAPEPTIDE-TRANSFERASE	BACILLUS SUBTILIS	106-133	247-281							
PMREB_BACCE	ROD SHAPE-DETERMINING PROTEIN MREB	BACILLUS CEREUS	186-213								
PMREC_BACSU	ROD SHAPE-DETERMINING PROTEIN MREC	BACILLUS SUBTILIS	65-112								
PMRKB_KLEPN	CHAPERONE PROTEIN MRKB PRECURSOR	KLEBSIELLA PNEUMONIAE	198-232								
PMRKC_KLEPN	MRKC PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	55-82	452-489	592-622						

BAD ORIGINAL

PCGENE	1071178.14	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA.1	AREA.1	AREA.2	AREA.2	AREA.3	AREA.3	AREA.4	AREA.4	AREA.5	AREA.5	AREA.6	AREA.6	AREA.7	AREA.7	AREA.8	AREA.8
PMOKD_KLEPN	FIMBRIA ADHESIN PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	222-288															
PMOKE_KLEPN	MOKE PROTEIN	KLEBSIELLA PNEUMONIAE	193-220															
PMOP4_STRPY	FIBRINOGEN-/IG-BINDING PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	7-46	99-310														
PMOP_STRSU	MURAMIDASE-RELEASED PROTEIN PRECURSOR	STREPTOCOCCUS SUIS	73-102	118-177	261-291	421-448	507-534	588-623	773-800	1058-1085								
PMSBA_ECOLI	PROB ATP-BINDING TRANSPORT PROTEIN MSBA	ESCHERICHIA COLI	116-150	412-449														
PMSEA_STAEP	ERYTHROMYCIN RESISTANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	174-221	323-350														
PMSYB_ECOLI	ACIDIC PROTEIN MSYB	ESCHERICHIA COLI	73-100															
PMT37_ECOLI	MODIFICATION METHYLASE ECO57I	ESCHERICHIA COLI	250-284	474-544														
PMTA1_ACICA	MODIFICATION METHYLASE ACCI	ACINETOBACTER CALCOACETICUS	503-540															
PMTAB_SYNP2	MODIFICATION METHYLASE AQUI BETA SUBUNIT	SYNECHOCOCCUS SP	19-46															
PMTB1_BREEP	MODIFICATION METHYLASE BEPI	BREVIBACTERIUM EPIDERMIDIS	166-200	309-336														
PMTB1_HERAU	MODIFICATION METHYLASE HGIBI	HERPETOSIPHON AURANTIACUS	281-308															
PMTB2_BACAM	MODIFICATION METHYLASE BAMORII	BACILLUS AMYLOLIQUEFACIENS	33-62															
PMTB3_BACAR	MODIFICATION METHYLASE BANIII	BACILLUS ANEURINOLYTICUS	184-211															
PMTBA_BACAR	MODIFICATION METHYLASE BANI	BACILLUS ANEURINOLYTICUS	121-148	382-409														
PMTBB_BACSU	MODIFICATION METHYLASE BSUBI	BACILLUS SUBTILIS	231-258	467-496														
PMTBF_BACSU	MODIFICATION METHYLASE BSUFI	BACILLUS SUBTILIS	208-235															
PMTC1_CITFR	MODIFICATION METHYLASE CFRBI	CITROBACTER FREUNDII	2-36	55-82	232-279													
PMTC1_HERAU	MODIFICATION METHYLASE HGICI	HERPETOSIPHON AURANTIACUS	120-147															
PMTC2_HERAU	MODIFICATION METHYLASE HGICII	HERPETOSIPHON AURANTIACUS	281-311															
PMTE1_ECOLI	MODIFICATION METHYLASE ECOKI	ESCHERICHIA COLI	76-110	145-172														
PMTE1_HERAU	MODIFICATION METHYLASE HOEI	HERPETOSIPHON AURANTIACUS	281-308															
PMTE2_ECOLI	MODIFICATION METHYLASE ECONII	ESCHERICHIA COLI	4-61															
PMTE5_ECOLI	MODIFICATION METHYLASE ECO RV	ESCHERICHIA COLI	73-100															
PMTEC_ENTCL	MODIFICATION METHYLASE ECAJ	ENTEROBACTER CLOACAE	418-445															
PMTF1_FLAOK	MODIFICATION METHYLASE FOKI	FLAVOBACTERIUM OKEANOKOITES	184-211	279-306	337-366	398-423	535-646											
PMTF1_FUSNU	MODIFICATION METHYLASE FNUDI	FUSOBACTERIUM NUCLEATUM	22-49															
PMTG2_HAEGA	MODIFICATION METHYLASE HGAI:2	HAEMOPHILUS GALLINARUM	135-165															
PMTH2_HAEIN	MODIFICATION METHYLASE HINCII	HAEMOPHILUS INFLUENZAE	181-208	299-326														
PMTH2_METTF	MODIFICATION METHYLASE MTHZI	METHANOBACTERIUM THERMOFORMICICUM	188-215	296-323														
PMTK1_KLEPN	MODIFICATION METHYLASE KPNI	KLEBSIELLA PNEUMONIAE	270-297															
PMTLD_STRMU	MANNITOL-1-PHOSPHATE 5-DEHYDROGENASE	STREPTOCOCCUS MUTANS	39-66	224-251	349-376													
PMTM1_MORSP	MODIFICATION METHYLASE MSPI	MORAXELLA SP	5-39	49-104														
PMTN3_NEILA	MODIFICATION METHYLASE NLAIII	NEISSERIA LACTAMICA	124-158	183-210														
PMTP2_PROVU	MODIFICATION METHYLASE PVUII	PROTEUS VULGARIS	308-335															
PMTPG_SULAC	MEMBRANE-ASSOCIATED ATPASE	SULFOLOBUS ACIDOCALDARIUS	9-67															
PMTPS_PROST	MODIFICATION METHYLASE PSTI	PROVIDENCIA STUARTII	226-264															
PMTR_ECOLI	TRYPTOPHAN-SPECIFIC TRANSPORT PROTEIN	ESCHERICHIA COLI	80-107															
PMTS1_STRSA	MODIFICATION METHYLASE STSI	STREPTOCOCCUS SANGUIS	116-153	434-461	600-645													
PMTS2_SHISO	MODIFICATION METHYLASE SSOII	SHIGELLA SONNEI	81-108															
PMTS9_STAAU	MODIFICATION METHYLASE SAU96I	STAPHYLOCOCCUS AUREUS	233-274															
PMTSA_LACLC	MODIFICATION METHYLASE SCRFI-A	LACTOCOCCUS LACTIS	88-115	187-214														
PMTSB_LACLC	MODIFICATION METHYLASE SCRFI-B	LACTOCOCCUS LACTIS	27-61															
PMTSI_SPISQ	CPG DNA METHYLASE	SPIROPLASMA SP	188-230	236-290														
PMTSM_SERMA	MODIFICATION METHYLASE SMAI	SERRATIA MARCESCENS	61-88															
PMTT8_THETH	MODIFICATION METHYLASE TTHHBI	THERMUS AQUATICUS	120-157															
PMTV1_VIBSJ	MODIFICATION METHYLASE VSPI	VIBRIO SP	23-66															
PMUKB_ECOLI	MUKB PROTEIN	ESCHERICHIA COLI	320-381	1014-1048	1216-1252													
PMULI_ERWAM	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	ERWINIA AMYLOVORA	24-54															
PMULI_MOXMO	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	MORGANELLA MORGANII	27-54															
PMULI_PROMI	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	PROTEUS MIRABILIS	21-53															
PMURB_BACSU	UDP-LIGASE	BACILLUS SUBTILIS	101-132	299-326														
PMURE_ECOLI	LIGASE	ESCHERICHIA COLI	107-134															
PMURF_ECOLI	UDP-MURNAC-PENTAPEPTIDE SYNTHETASE	ESCHERICHIA COLI	407-437															
PMURZ_ECOLI	ENOYLPYRUVATE TRANSFERASE	ESCHERICHIA COLI	392-419															
PMURZ_ENTCL	ENOYLPYRUVATE TRANSFERASE	ENTEROBACTER CLOACAE	392-419															
PMUTA_STRCM	METHYLMALONYL-COA MUTASE BETA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	31-58															

BAD ORIGINAL

PCGENE	107a117a:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PMUTB_PROPA	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	PROPIONIBACTERIUM FREUDENREICHII	349-376								
PMUTB_SALTY	(S)-SPECIFIC ADENINE GLYCOSYLASE	SALMONELLA TYPHIMURIUM	273-300								
PMUTB_STRCM	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	481-508								
PMUTL_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTL	ESCHERICHIA COLI	80-114								
PMUTL_SALTY	DNA MISMATCH REPAIR PROTEIN MUTL	SALMONELLA TYPHIMURIUM	80-114								
PMUTL_VIBCH	PROTEIN MUTL	VIBRIO CHOLERAE	134-169								
PMUTS_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTS	ESCHERICHIA COLI	119-153								
PMUTT_STRAM	MUTT-LIKE PROTEIN	STREPTOMYCES AMBOFACIENS	60-87								
PNVAA_PSEMV	COENZYME A REDUCTASE	PSEUDOMONAS MEVALONII	341-368								
PMX_STRPY	M-RELATED PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	5-129	148-182	190-217	240-301					
PMYCO_STRCI	MYCOLYSIN PRECURSOR	STREPTOMYCES CACAOI	308-332								
PMYFC_YEREN	MYFC PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	210-237								
PNADC_SALTY	NICOTINATE-NUCLEOTIDE PYROPHOSPHORYLASE	SALMONELLA TYPHIMURIUM	133-154	235-289							
PNADR_SALTY	TRANSCRIPTIONAL REGULATOR NADR	SALMONELLA TYPHIMURIUM	213-260								
PNAGD_ECOLI	NAGD PROTEIN	ESCHERICHIA COLI	75-102								
PNAGH_CLOPE	HYALURONOGLUCOSAMINIDASE	CLOSTRIDIUM PERFRINGENS	48-75	990-1017							
PNAGR_ECOLI	NAGR PROTEIN	ESCHERICHIA COLI	119-153								
PNANH_CLOSE	SIALIDASE PRECURSOR	CLOSTRIDIUM SEPTICUM	11-42	289-330	922-958						
PNANH_CLOSO	SIALIDASE PRECURSOR	CLOSTRIDIUM SORDELLII	377-404								
PNANH_SALTY	SIALIDASE	SALMONELLA TYPHIMURIUM	290-317								
PNAPA_ENTHR	NA(+)/H(+) ANTIPORTER	ENTEROCOCCUS HIRAE	116-150								
PNARG_ECOLI	RESPIRATORY NITRATE REDUCTASE ALPHA CHAIN	ESCHERICHIA COLI	386-420								
PNARL_ECOLI	REGULATOR PROTEIN NARL	ESCHERICHIA COLI	76-103								
PNARP_ECOLI	REGULATOR PROTEIN NARP	ESCHERICHIA COLI	155-189								
PNARX_ECOLI	NITRATE/NITRITE SENSOR PROTEIN NARX	ESCHERICHIA COLI	220-247	358-385	431-458	505-538					
PNDVA_RHIME	BETA-(1-->2)GLUCAN EXPORT PROTEIN	RHIZOBIUM MELILOTI	212-239								
PNEOR_STRCY	NEOMYCIN RESISTANCE PROTEIN	STREPTOMYCES CYANOGENUS	348-375								
PNEUA_ECOLI	ACYLNEURAMINATE CYTIDYLYLTRANSFERASE	ESCHERICHIA COLI	218-252	268-298							
PNFRA_ECOLI	N4 ADSORPTION PROTEIN A PRECURSOR	ESCHERICHIA COLI	490-517								
PNFRB_ECOLI	N4 ADSORPTION PROTEIN B	ESCHERICHIA COLI	2-43	186-220	511-538						
PNFRC_ECOLI	N4 ADSORPTION PROTEIN C	ESCHERICHIA COLI	315-342								
PNFSI_ENTCL	NADP(H) NITROREDUCTASE	ENTEROBACTER CLOACAE	9-36								
PNHAA_ECOLI	NA(+)/H(+) ANTIPORTER 1	ESCHERICHIA COLI	206-233								
PNHAB_ECOLI	NA(+)/H(+) ANTIPORTER 2	ESCHERICHIA COLI	271-305								
PNHAB_PSECL	NITRILE HYDRATASE SUBUNIT BETA	PSEUDOMONAS CHLORORAPHIS	71-101								
PNHB1_RHOHA	NITRILE HYDRATASE SUBUNIT BETA	RHODOCOCCUS RHODOCHROUS	63-93								
PNIFA_AZOBR	NIF-SPECIFIC REGULATORY PROTEIN	AZOSPIRILLUM BRASILENSE	7-44								
PNIFA_BRAJA	NIF-SPECIFIC REGULATORY PROTEIN	BRADYRHIZOBIUM JAPONICUM	252-279								
PNIFA_HERSE	NIF-SPECIFIC REGULATORY PROTEIN	HERBASPIRILLUM SEROPEDICAE	9-51	162-203	327-354						
PNIFA_RHILE	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	100-127								
PNIFA_RHIME	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM MELILOTI	171-198								
PNIFA_RIIOCA	NIF-SPECIFIC REGULATORY PROTEIN	RIIODOBACTER CAPSULATUS	260-287								
PNIFB_AZOVI	NIFB PROTEIN	AZOTOBACTER VINELANDII	342-369								
PNIFB_KLEPN	NIFB PROTEIN	KLEBSIELLA PNEUMONIAE	154-181								
PNIFD_ANASP	NITROGENASE MOLYBD-IRON PROTEIN	ANABAENA SP	374-401								
PNIFD_AZOBR	NITROGENASE MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	377-404								
PNIFD_PLEBO	NITROGENASE MOLYBD-IRON PROTEIN	PLECTONEMA BORYANUM	387-414								
PNIFD_THIFE	NITROGENASE MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	383-410								
PNIFE_CLOPA	BIOSYNTHESIS PROTEIN NIFE	CLOSTRIDIUM PASTEURIANUM	359-386								
PNIFH_FRAAR	NITROGENASE IRON PROTEIN	FRANKIA SP	56-83								
PNIFH_PLEBO	NITROGENASE IRON PROTEIN	PLECTONEMA BORYANUM	267-294								
PNIFK_AZOBR	NITROGENASE MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	430-457								
PNIFK_BRAJA	NITROGENASE MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM JAPONICUM	483-510								
PNIFK_BRASP	NITROGENASE MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM SP	478-505								
PNIFK_CLOPA	NITROGENASE MOLYBD-IRON PROTEIN	CLOSTRIDIUM PASTEURIANUM	227-254								
PNIFK_THIFE	NITROGENASE MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	479-506								
PNIFM_AZOCH	NIFM PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	265-292								

BAD ORIGINAL

PCGENE	107s17Bp4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA1	AREA2
PNIFN_BRAJA	BIOSYNTHESIS PROTEIN NIFN	BRADYRHIZOBIUM JAPONICUM	339-366								
PNIFS_ANASP	NIFS PROTEIN	ANABAENA SP	112-139								
PNIFS_LACDE	NIFS PROTEIN HOMOLOG	LACTOBACILLUS DELBRUECKII	39-66								
PNIFT_AZOVI	NIFT PROTEIN	AZOTOBACTER VINELANDII	6-33								
PNIFU_ANASL	NIFU PROTEIN	ANABAENA SP	7-49								
PNIFU_ANASP	NIFU PROTEIN	ANABAENA SP	148-178								
PNIFU_KLEPN	NIFU PROTEIN	KLEBSIELLA PNEUMONIAE	66-93								
PNIKA_ECOLI	NICKEL TRANSPORT PROTEIN NIKA PRECURSOR	ESCHERICHIA COLI	122-149	282-309	456-483						
PNIKE_ECOLI	NICKEL TRANSPORT PROTEIN NIKE	ESCHERICHIA COLI	177-204								
PNIRB_ECOLI	NITRITE REDUCTASE	ESCHERICHIA COLI	54-81	345-372							
PNIRC_ECOLI	NIRC PROTEIN	ESCHERICHIA COLI	212-239								
PNIRS_PSEST	PSEUDOMONAS CYTOCHROME OXIDASE PRECURSO	PSEUDOMONAS STUTZERI	303-333								
PNISB_LACLA	117 KD MEMBRANE ASSOCIATED PROTEIN	LACTOCOCCUS LACTIS	202-229	287-312	663-697	886-920					
PNISC_LACLA	NISIN BIOSYNTHESIS PROTEIN NISC	LACTOCOCCUS LACTIS	92-92	140-188							
PNIST_LACLA	NISIN TRANSPORT PROTEIN NIST	LACTOCOCCUS LACTIS	223-257	278-305	426-470						
PNIVA_CLOPA	HOMOCITRATE SYNTHASE, ALPHA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	100-127	234-268							
PNIVO_CLOPA	HOMOCITRATE SYNTHASE, OMEGA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	61-94	103-132	213-240	283-310					
PNMPC_ECOLI	PORIN PROTEIN NMPC PRECURSOR	ESCHERICHIA COLI	22-49	69-96	335-362						
PNODC_BRASP	NODULATION PROTEIN C	BRADYRHIZOBIUM SP	3-30								
PNODC_RHILO	NODULATION PROTEIN C	RHIZOBIUM LOTI	286-313								
PNODC_RHILT	NODULATION PROTEIN C	RHIZOBIUM LEGUMINOSARUM	14-48								
PNODF_RHILV	NODULATION PROTEIN F	RHIZOBIUM LEGUMINOSARUM	31-58								
PNODF_RHIMS	NODULATION PROTEIN F	RHIZOBIUM MELILOTI	39-66								
PNODG_RHIME	NODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODG_RHIMS	NODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODL_RHILV	NODULATION PROTEIN L	RHIZOBIUM LEGUMINOSARUM	26-53								
PNODQ_AZOBR	NODULATION PROTEIN Q	AZOSPIRILLUM BRASILENSE	60-87								
PNODT_RHILT	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	104-134	335-382	420-454						
PNODT_RHILV	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	364-391	416-443							
PNODU_RHIFR	NODULATION PROTEIN U	RHIZOBIUM FREDII	306-336								
PNODV_BRAJA	NODULATION PROTEIN V	BRADYRHIZOBIUM JAPONICUM	378-419	738-766							
PNODX_RHILV	NODULATION PROTEIN X	RHIZOBIUM LEGUMINOSARUM	222-259								
PNOLB_RHIFR	NODULATION PROTEIN NOLB	RHIZOBIUM FREDII	133-160								
PNOLA_RHIME	NODULATION PROTEIN NOLA	RHIZOBIUM MELILOTI	88-115								
PNOSD_PSEST	NOSD PROTEIN PRECURSOR	PSEUDOMONAS STUTZERI	319-346								
PNOSR_PSEST	REGULATORY PROTEIN NOSR	PSEUDOMONAS STUTZERI	127-154								
PNOSZ_PSEAE	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS AERUGINOSA	267-294								
PNOSZ_PSEST	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS STUTZERI	337-391								
PNPRE_BACAM	BACILLOLYSIN PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	113-147	217-244							
PNPRE_BACPO	BACILLOLYSIN PRECURSOR	BACILLUS POLYMYXA	57-91	187-228							
PNPRE_BACSU	BACILLOLYSIN PRECURSOR	BACILLUS SUBTILIS	116-146	307-334							
PNQO3_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 21 KD CHAI	PARACOCCUS DENITRIFICANS	4-45								
PNQO9_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 29 KD CHAIN	PARACOCCUS DENITRIFICANS	134-152								
PNRDD_ECOLI	ANAER RIBONUC-TRIPHOS REDUCTASE	ESCHERICHIA COLI	91-125								
PNRA_ECOLI	CYTOCHROME C552 PRECURSOR	ESCHERICHIA COLI	319-346								
PNRFG_ECOLI	NRFG PROTEIN	ESCHERICHIA COLI	72-111								
PNRLI_RHORH	ALIPHATIC NITRILASE	RHODOCOCCUS RHODOCHROUS	109-136								
PNSR_LACLA	NISIN-RESISTANCE PROTEIN	LACTOCOCCUS LACTIS	52-79	135-162							
PNTCA_ANASP	DNA-BINDING PROTEIN VF1	ANABAENA SP	65-92								
PNTCA_SYNY3	GLOBAL NITROGEN REGULATOR	SYNECHOCOCCUS SP	44-91								
PNTCA_SYNY3	GLOBAL NITROGEN REGULATOR	SYNECHOCYSTIS SP	67-94								
PNTRB_VIBAL	NITROGEN REGULATION PROTEIN NTRB	VIBRIO ALGINOLYTICUS	194-223								
PNTRC_PROVU	NITROGEN REGULATION PROTEIN NR	PROTEUS VULGARIS	385-412								
PNTRC_RHIME	NITROGEN ASSIMILATION REGULATORY PROTEIN	RHIZOBIUM MELILOTI	451-478								
PNUJC_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	80-107								
PNUJC_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	27-54								
PNUJC_SYNP2	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	614-641								

BAD ORIGINAL

PCGENE	107x178x4	Prokaryotic Sequences								
FILE_NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNUC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	163-190								
PNUC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	169-199								
PNUL_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	46-80								
PNUO0_ECOLI	NADH DEHYDROGENASE I CHAIN O	ESCHERICHIA COLI	168-402								
PNUL_ECOLI	NADH DEHYDROGENASE I CHAIN L	ESCHERICHIA COLI	30-57	496-523							
PNUN_ECOLI	NADH DEHYDROGENASE I CHAIN N	ESCHERICHIA COLI	392-419								
PNUPC_ECOLI	NUCLEOTIDE PERMEASE	ESCHERICHIA COLI	13-43	134-164	156-183						
PNUSA_ECOLI	NUSA PROTEIN	ESCHERICHIA COLI	21-62								
PNUSB_ECOLI	N UTILIZATION SUBSTANCE PROTEIN B	ESCHERICHIA COLI	17-65	70-97							
PNUSG_ECOLI	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	ESCHERICHIA COLI	141-168								
PNUSG_THEMA	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	THERMOTOGA MARITIMA	203-230								
PNYLB_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250								
PNYLC_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250								
PO16G_BACCE	OLIGO-1,6-GLUCOSIDASE	BACILLUS CEREUS	301-328								
POCCT_AGATA	OCTOPINE-BINDING PROTEIN T PRECURSOR	AGROBACTERIUM TUMEFACIENS	172-202								
PODO1_AZOVI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	AZOTOBACTER VINELANDII	829-856								
PODO1_BACSU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	BACILLUS SUBTILIS	487-524	806-850							
PODO1_ECOLI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	ESCHERICHIA COLI	6-33								
PODO2_BACSU	DIHYDROLIPOAMIDE SUC-TRANSF COMP	BACILLUS SUBTILIS	30-60								
PODO8_PSEPU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	PSEUDOMONAS PUTIDA	223-254								
PODP1_ECOLI	PYRUVATE DEHYDROGENASE E1 COMPONENT	ESCHERICHIA COLI	624-651								
PODP2_AZOVI	DIHYDROLIPOAMIDE ACETRANS COMP	AZOTOBACTER VINELANDII	518-545								
PODP2_ECOLI	DIHYDROLIPOAMIDE ACETRANS COMP	ESCHERICHIA COLI	14-41	117-144							
PODPA_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	299-333								
PODPB_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	305-332								
PODPB_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	23-50								
PODPB_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	16-50								
PONIE_CHLTR	13 KD CYSTEINE-RICH PROTEIN_SEROVAR E	CHLAMYDIA TRACHOMATIS	38-65								
PONA1_NEIGO	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
PONA1_NEIME	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA MENINGITIDIS	339-386								
PONA2_NEIME	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA MENINGITIDIS	333-380								
PONB1_NEIGO	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
PONB1_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
PONB3_NEIGO	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
PONB3_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
PONB5_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
PONB6_NEIME	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA MENINGITIDIS	24-51	63-90							
PONB_NEILA	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA LACTAMICA	116-143								
PONB_NEISI	OUTER MEMBRANE PROTEIN P 1B PRECURSOR	NEISSERIA SICCA	24-51	63-90							
PORLA_ACTPL	OUTER MEMBRANE LIPOPROTEIN PRECURSOR	ACTINOBACILLUS PLEUROPNEUMONIAE	114-151								
PORP1_HAEIN	OUTER MEMBRANE PROTEIN P1 PRECURSOR	HAEMOPHILUS INFLUENZAE	134-184	303-330	341-368						
PORP2_HAEIN	OUTER MEMBRANE PROTEIN P2 PRECURSOR	HAEMOPHILUS INFLUENZAE	16-71	220-254	326-353						
PORP3_NEIGO	OUTER MEMBRANE PROTEIN P.III PRECURSOR	NEISSERIA GONORRHOEAE	14-41								
PORP7_STAAU	70 KD OUTER MEMBRANE PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	53-80	88-115							
PORPA_THEMA	OUTER MEMBRANE PROTEIN ALPHA PRECURSOR	THERMOTOGA MARITIMA	100-138	151-178	183-249	255-292	301-328	331-383			
PORPC_ECOLI	OUTER MEMBRANE PROTEIN C PRECURSOR	ESCHERICHIA COLI	20-47	64-94							
PORPC_NEIGO	OUTER MEMBRANE PROTEIN P.IIC PRECURSOR	NEISSERIA GONORRHOEAE	89-123								
PORPC_SALTI	OUTER MEMBRANE PROTEIN C PRECURSOR	SALMONELLA TYPHI	166-193								
PORPF_ECOLI	OUTER MEMBRANE PROTEIN F PRECURSOR	ESCHERICHIA COLI	21-53	231-258							
POMPH_PHI39	OMPH PROTEIN	PHOTOBACTERIUM SP	292-319								
POMPT_ECOLI	PROTEASE VII PRECURSOR	ESCHERICHIA COLI	37-64								
POP65_NEIGO	OPACITY PROTEIN OPA65	NEISSERIA GONORRHOEAE	71-111								
POP67_NEIGO	OPACITY PROTEIN OPA67	NEISSERIA GONORRHOEAE	72-109								
POPAA_NEIGO	OPACITY PROTEIN OPA33	NEISSERIA GONORRHOEAE	71-123	140-167							
POPAG_NEIGO	OPACITY PROTEIN OPA32	NEISSERIA GONORRHOEAE	80-107	140-167							
POPAJ_NEIGO	OPACITY PROTEIN OPA54	NEISSERIA GONORRHOEAE	80-107								
POPAJ_NEIGO	OPACITY PROTEIN OPA58	NEISSERIA GONORRHOEAE	71-105								

BAD ORIGINAL

PECGENE	1872:17844	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
POPAK_NEIGO	OPACITY PROTEIN OPA37	NEISSERIA GONORRHOEAE	71-109								
POPDA_ECOLI	OLIGOPEPTIDASE A	ESCHERICHIA COLI	147-174								
POPDA_SALTY	OLIGOPEPTIDASE A	SALMONELLA TYPHIMURIUM	147-174								
POPDE_PSEAE	TRANSCRIPTION FACTOR OPDE	PSEUDOMONAS AERUGINOSA	64-91								
POPPA_ECOLI	OLIGOPEPTIDE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	402-432								
POPPB_SALTY	OLIGOPEPTIDE PERMEASE PROTEIN OPPB	SALMONELLA TYPHIMURIUM	265-299								
POPR1_NEIME	OPACITY-RELATED PROTEIN POPM1	NEISSERIA MENINGITIDIS	108-135								
POPR1_NEIME	OPACITY-RELATED PROTEIN POPM3	NEISSERIA MENINGITIDIS	94-133								
POSMC_ECOLI	OSMOTICALLY INDUCIBLE PROTEIN OSMC	ESCHERICHIA COLI	5-32								
POSPA_BORBU	OUTER SURFACE PROTEIN A PRECURSOR	BORRELIA BURGDORFERI	63-100	112-139	157-204	223-271					
POSPB_BORBU	OUTER SURFACE PROTEIN B PRECURSOR	BORRELIA BURGDORFERI	113-259	262-296							
POTCI_BACSU	ORNITHINE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	188-215								
POTCC_PSEAE	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	17-44								
POTCC_PSEPU	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS PUTIDA	3-33								
POUTB_BACSU	SPORE OUTGROWTH FACTOR B	BACILLUS SUBTILIS	225-252								
POUTO_ERWCA	LEADER PEPTIDASE	ERWINIA CAROTOVORA	189-216								
PP18K_STRPA	18 KD PROTEIN IN FIMA 3'REGION	STREPTOCOCCUS PARASANGUIS	115-149								
PP18K_STRSA	18 KD PROTEIN IN SSAB 3'REGION	STREPTOCOCCUS SANGUIS	10-37	114-148							
PP1P_LACLC	P1-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1466-1496	1625-1655			
PP29_MYCHR	PROTEIN P29	MYCOPLASMA HYORHINIS	5-56	101-160	202-246						
PP2P_LACLA	P1I-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1625-1688			
PP2P_LACPA	P1I-TYPE PROTEINASE PRECURSOR	LACTOBACILLUS PARACASEI	107-155	904-941	1073-1100	1223-1250	1446-1496	1628-1655			
PP30_ECOLI	P30 PROTEIN	ESCHERICHIA COLI	55-82								
PP34_RICRI	PROTEIN P34	RICKETTSIA RICKETTSII	9-47	135-173							
PP37_MYCHR	PROTEIN P37 PRECURSOR	MYCOPLASMA HYORHINIS	38-75								
PP3P_LACLC	P111-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1628-1655			
PP47K_PSECL	47 KD PROTEIN	PSEUDOMONAS CHLORORAPHIS	288-315								
PP54_ENTFC	P54 PROTEIN PRECURSOR	ENTEROCOCCUS FAECIUM	58-92	141-209							
PP60_LISGR	PROTEIN P60 PRECURSOR	LISTERIA GRAYI	31-61	101-142	300-334	431-458					
PP60_LISIN	PROTEIN P60 PRECURSOR	LISTERIA INNOCUA	67-84	102-143							
PP60_LISIV	PROTEIN P60 PRECURSOR	LISTERIA IVANOVII	101-140	315-359							
PP60_LISMO	PROTEIN P60 PRECURSOR	LISTERIA MONOCYTOGENES	101-144								
PP60_LISSE	PROTEIN P60 PRECURSOR	LISTERIA SEELIGERI	101-140	270-298	321-365	395-422					
PP60_LISWE	PROTEIN P60 PRECURSOR	LISTERIA WELSHIMERI	113-140	317-361	396-423						
PP69_MYCHR	PROTEIN P69	MYCOPLASMA HYORHINIS	284-295	421-464	487-517	544-575					
PPABA_BACSU	ADC SYNTHASE	BACILLUS SUBTILIS	12-41								
PPABC_BACSU	4-AMINO-4-DEOXYCHORISMATE LYASE	BACILLUS SUBTILIS	230-277								
PPABC_ECOLI	4-AMINO-4-DEOXYCHORISMATE LYASE	ESCHERICHIA COLI	140-167								
PPABL_STRGR	PROTEIN Y	STREPTOMYCES GRISEUS	52-79								
PPAC_ARTVI	PENICILLIN ACYLASE PRECURSOR	ARTHROBACTER VISCOSUS	176-197	333-363	571-606	640-674					
PPAC_BACSH	PENICILLIN ACYLASE	BACILLUS SPHAERICUS	232-259								
PPAC_STRMU	PAC PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	146-176	281-465	538-565	576-630	1075-1102	1139-1186	1381-1434		
PPAI1_BACSU	REGULATORY PROTEIN PAI 1	BACILLUS SUBTILIS	101-137								
PPAI2_BACSU	REGULATORY PROTEIN PAI 2	BACILLUS SUBTILIS	145-172								
PPAPE_ECOLI	FIMBRIAL PROTEIN PAPE	ESCHERICHIA COLI	42-69	86-123							
PPAPF_ECOLI	MINOR FIMBRIAL PROTEIN PAPF	ESCHERICHIA COLI	4-31								
PPAPG_ECOLI	FIMBRIAL PROTEIN PAPG PRECURSOR	ESCHERICHIA COLI	282-316								
PPARA_AGRTU	PARA PROTEIN	AGROBACTERIUM TUMEFACIENS	60-87								
PPAUB_ECOLI	PLASMID PARTITION PAR B PROTEIN	ESCHERICHIA COLI	117-134	249-283							
PPAUE_ECOLI	TOPOISOMERASE IV SUBUNIT B	ESCHERICHIA COLI	444-471	526-553							
PPAUE_SALTY	TOPOISOMERASE IV SUBUNIT B	SALMONELLA TYPHIMURIUM	444-471	526-553							
PPA_BACAN	PROTECTIVE ANTIGEN PRECURSOR	BACILLUS ANTHRACIS	13-32	123-152	296-333	583-613	650-684				
PPBP2_ECOLI	PENICILLIN-BINDING PROTEIN 2	ESCHERICHIA COLI	93-122	178-205	207-241						
PPBP2_NEIGO	PENICILLIN-BINDING PROTEIN 2	NEISSERIA GONORRHOEAE	193-220								
PPBP2_NEIME	PENICILLIN-BINDING PROTEIN 2	NEISSERIA MENINGITIDIS	193-220								
PPBP3_STRPN	PENICILLIN-BINDING PROTEIN 2B	STREPTOCOCCUS PNEUMONIAE	144-181	216-243	259-286	603-632					
PPBP3_ECOLI	PENICILLIN-BINDING PROTEIN 3 PRECURSOR	ESCHERICHIA COLI	224-251	334-368							

BAD ORIGINAL

PCGENE	1107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPBP4_BACSU	PENICILLIN-BINDING PROTEIN 4*	BACILLUS SUBTILIS	374-401								
PPBP4_ECOLI	PENICILLIN-BINDING PROTEIN 4 PRECURSOR	ESCHERICHIA COLI	336-363								
PPBPA_ECOLI	PENICILLIN-BINDING PROTEIN 1A	ESCHERICHIA COLI	145-172								
PPBPB_ECOLI	PENICILLIN-BINDING PROTEIN 1B	ESCHERICHIA COLI	62-90	263-290							
PPBPX_STRPN	PENICILLIN-BINDING PROTEIN 2X	STREPTOCOCCUS PNEUMONIAE	89-116	706-733							
PPBP_STAAU	PENICILLIN-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	78-108	176-203	263-324	502-529					
PPCAB_PSEPU	CYCLOISOMERASE	PSEUDOMONAS PUTIDA	115-142	226-253							
PPELJ_ERWCA	PECTATE LYASE III PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELA_ERWCA	PECTATE LYASE A PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELB_ERWCA	PECTATE LYASE B PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELC_ERWCA	PECTATE LYASE C PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELF_ERWCH	PECTATE LYASE E PRECURSOR	ERWINIA CHRYSANTHEMI	40-67	209-243							
PPELP_ERWCA	PERIPLASMIC PECTATE LYASE PRECURSOR	ERWINIA CAROTOVORA	455-482								
PPELP_YERPS	PERIPLASMIC PECTATE LYASE PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	459-489								
PPELX_ERWCA	PUTATIVE PECTATE LYASE X PRECURSOR	ERWINIA CAROTOVORA	188-218								
PPELX_ERWCH	EXOPOLYGALACTURONATE LYASE PRECURSOR	ERWINIA CHRYSANTHEMI	466-493								
PPEPD_ECOLI	AMINOACYL-HISTIDINE DIPEPTIDASE	ESCHERICHIA COLI	264-314								
PPEPQ_ECOLI	X-PRO DIPEPTIDASE	ESCHERICHIA COLI	231-278								
PPERT_BORBR	PERTACTIN PRECURSOR	BORDETELLA BRONCHISEPTICA	617-644								
PPERT_BORPA	PERTACTIN PRECURSOR	BORDETELLA PARAPERTUSSIS	628-655								
PPERT_BORPE	PERTACTIN PRECURSOR	BORDETELLA PERTUSSIS	616-643								
PPGK_CORGL	PHOSPHOGLYCERATE KINASE	CORYNEBACTERIUM GLUTAMICUM	83-117								
PPGK_ECOLI	PHOSPHOGLYCERATE KINASE	ESCHERICHIA COLI	186-216								
PPGK_METBR	PHOSPHOGLYCERATE KINASE	METHANOBACTERIUM BRYANTII	36-63								
PPGK_THETH	PHOSPHOGLYCERATE KINASE	THERMUS AQUATICUS	223-249								
PPGL1_ERWCA	ENDO-POLYGALACTURONASE PRECURSOR	ERWINIA CAROTOVORA	237-271								
PPGTE_SALTY	OUTER MEMBRANE PROTEASE E PRECURSOR	SALMONELLA TYPHIMURIUM	66-93								
PPHA1_FREDI	C-PHYCOCYANIN-1 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPHA2_FREDI	C-PHYCOCYANIN-2 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPHAA_PSEOL	POLY(3-HYDROXYALKANOATE) POLYMERASE 1	PSEUDOMONAS OLEOVORANS	264-291								
PPHAB_ANACY	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA CYLINDRICA	7-48								
PPHAB_ANAVA	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA VARIABILIS	14-48								
PPHAB_FREDI	ALLOPHYCOCYANIN BETA CHAIN	FREMYELLA DIPLOSIPHON	8-49								
PPHAB_MASLA	ALLOPHYCOCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	14-41								
PPHAB_SYNP6	ALLOPHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	14-41								
PPHAC_SYNP6	ALLOPHYCOCYANIN ALPHA-B CHAIN	SYNECHOCOCCUS SP	33-60								
PPHAG_FREDI	ALLOPHYCOCYANIN GAMMA CHAIN	FREMYELLA DIPLOSIPHON	32-59								
PPHBJ_FREDI	C-PHYCOCYANIN-3 BETA CHAIN	FREMYELLA DIPLOSIPHON	29-56								
PPHBB_ALCEU	ACETOACETYL-COA REDUCTASE	ALCALIGENES EUTROPHUS	55-83								
PPHCA_SYNY1	C-PHYCOCYANIN ALPHA CHAIN	SYNECHOCYSTIS SP	21-55								
PPHCB_SYNP6	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPHCB_SYNP7	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPHCB_SYNY1	C-PHYCOCYANIN BETA CHAIN	SYNECHOCYSTIS SP	21-55								
PPHEA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	10-37								
PPHEA_ERWHE	CHORISMATE MUTASE	ERWINIA HERBICOLA	10-37	159-186	252-286						
PPHEA_PSESP	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS SP	171-201	282-314	437-464						
PPHEB_MASLA	PHYCOERYTHROCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	21-62								
PPHEB_PSESP	CATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS SP	24-51								
PPHEG_SYNPY	LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	138-185								
PPHEP_ECOLI	PHENYLALANINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	284-311								
PPHF1_CLOPA	PERIPLASMIC [FE] HYDROGENASE 1	CLOSTRIDIUM PASTEURIANUM	434-471								
PPHL1_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHL2_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHL3_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHLC_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	32-59	179-206							
PPHLC_CLOBI	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM BIFERMENTANS	50-77	335-365							
PPHLC_CLOPE	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM PERFRINGENS	210-237	369-398							

BAD ORIGINAL

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPHLC_LISMO	PHOSPHOLIPASE C PRECURSOR	LISTERIA MONOCYTOGENES	147-174								
PPHLC_PSEAE	HEMOLYTIC PHOSPHOLIPASE C PRECURSOR	PSEUDOMONAS AERUGINOSA	685-712								
PPHLC_STAAU	PHOSPHOLIPASE C PRECURSOR	STAPHYLOCOCCUS AUREUS	6-33								
PPHLD_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	179-206								
PPHL_LEPIN	SPHINGOMYELINASE C PRECURSOR	LEPTOSPIRA INTERROGANS	30-57	394-428							
PPHND_ECOLI	PHND PROTEIN	ESCHERICHIA COLI	296-326								
PPHNK_ECOLI	PHNK PROTEIN	ESCHERICHIA COLI	178-205								
PPHNM_ECOLI	PHNM PROTEIN	ESCHERICHIA COLI	5-35								
PPHOE_CITFR	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	CITROBACTER FREUNDII	13-40	47-105							
PPHOE_ECOLI	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	ESCHERICHIA COLI	13-40	64-105	168-195	226-253					
PPHOE_KLEOX	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA OXYTOCA	13-40	64-91							
PPHOE_KLEPN	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA PNEUMONIAE	13-40	64-105							
PPHOE_SALTY	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	SALMONELLA TYPHIMURIUM	63-104	320-347							
PPHOP_BACSU	ALK PHOS SYNTHESIS TRANS REG PROTEIN	BACILLUS SUBTILIS	185-219								
PPHOQ_ECOLI	SENSOR PROTEIN PHOQ	ESCHERICHIA COLI	244-278								
PPHOQ_SALTY	VIRULENCE SENSOR PROTEIN PHOQ	SALMONELLA TYPHIMURIUM	226-260								
PPHOR_BACSU	ALK PHOS SYNTHESIS SENSOR PROTEIN PHOR	BACILLUS SUBTILIS	89-145	387-425							
PPHRA_ECOLI	PHOTOREPAIR PROTEIN PHRA	ESCHERICHIA COLI	63-90	207-241							
PPHRA_SYNPY	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHRA_SYNPZ	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHSQ_ECOLI	GLYCOGEN PHOSPHORYLASE	ESCHERICHIA COLI	157-184	488-515							
PPHSM_ECOLI	MALTODEXTRIN PHOSPHORYLASE	ESCHERICHIA COLI	71-108								
PPILA_NEIGO	PROB SIGNAL RECOGNITION PARTICLE PROTEIN	NEISSERIA GONORRHOEAE	17-68								
PPILB_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILB	PSEUDOMONAS AERUGINOSA	16-60								
PPILC_PSEAE	PILC PROTEIN	PSEUDOMONAS AERUGINOSA	143-170								
PPILD_NEIGO	LEADER PEPTIDASE	NEISSERIA GONORRHOEAE	110-137								
PPILQ_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILQ PRECURSOR	PSEUDOMONAS AERUGINOSA	71-115	639-666							
PPILS_PSEAE	SENSOR PROTEIN PILS	PSEUDOMONAS AERUGINOSA	9-46								
PPIR_ECOLI	PI PROTEIN	ESCHERICHIA COLI	156-188								
PPIV_MORBO	PILIN GENE INVERTING PROTEIN	MORAXELLA BOVIS	42-69	152-182							
PPIV_MORLA	PILIN GENE INVERTING PROTEIN	MORAXELLA LACUNATA	152-182								
PPLC_BACCE	PHOSPHODIESTERASE PRECURSOR	BACILLUS CEREUS	217-245								
PPLC_BACTU	PHOSPHODIESTERASE PRECURSOR	BACILLUS THURINGIENSIS	216-245								
PPLC_LISMO	PHOSPHODIESTERASE PRECURSOR	LISTERIA MONOCYTOGENES	238-265								
PPLSC_ECOLI	ACYLTRANSFERASE	ESCHERICHIA COLI	106-133								
PPLSX_ECOLI	PLSX PROTEIN	ESCHERICHIA COLI	241-270								
PPLYD_ERWCA	PECTIN LYASE	ERWINIA CAROTOVORA	27-92								
PPMBA_ECOLI	PMBA PROTEIN	ESCHERICHIA COLI	9-50								
PPME_ERWCH	PECTINESTERASE PRECURSOR	ERWINIA CHRYSANTHEMI	60-87								
PPMGY_ECOLI	PHOSPHOGLYCERATE MUTASE	ESCHERICHIA COLI	82-116								
PPMGY_ZYMM	PHOSPHOGLYCERATE MUTASE	ZYMOMONAS MOBILIS	13-40	80-110							
PPNP_ECOLI	POLYRIBONUC NUCLEOTIDYL TRANSF	ESCHERICHIA COLI	260-294								
PPNR_SALTY	PNR PROTEIN	SALMONELLA TYPHIMURIUM	178-205								
PPODK_BACSY	PYRUVATE,ORTHOPHOSPHATE DIKINASE	BACTEROIDES SYMBIOSUS	51-78								
PPORF_PSESY	OUTER MEMBRANE PORIN F PRECURSOR	PSEUDOMONAS SYRINGAE	111-138								
PPORO_PSEAE	PORIN O PRECURSOR	PSEUDOMONAS AERUGINOSA	390-424								
PPORP_PSEAE	PORIN P PRECURSOR	PSEUDOMONAS AERUGINOSA	139-181	260-287	369-396						
PPOTD_ECOLI	BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	320-347								
PPOTE_ECOLI	PUTRESCINE-ORNITHINE ANTIPORTER	ESCHERICHIA COLI	91-118								
PPOXB_ECOLI	PYRUVATE DEHYDROGENASE	ESCHERICHIA COLI	8-38								
PPPBJ_BACSU	ALKALINE PHOSPHATASE III PRECURSOR	BACILLUS SUBTILIS	109-150	433-460							
PPPBQ_BACSU	ALKALINE PHOSPHATASE IV PRECURSOR	BACILLUS SUBTILIS	85-123	336-363							
PPPB_ECOLI	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA COLI	235-262								
PPPB_ESCFE	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA FERGUSONII	236-263								
PPPCE_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199								
PPPCF_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199	256-283							
PPPCK_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYKINASE	ESCHERICHIA COLI	45-72								

BAD ORIGINAL

PCGENE	107:178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPPDA_CLOPE	PROTEIN A PRECURSOR	CLOSTRIDIUM PERFRINGENS	73-107								
PPPSA_ECOLI	PHOSPHOENOLPYRUVATE SYNTHASE	ESCHERICHIA COLI	49-76								
PPQQ2_ACICA	COENZYME PQQ SYNTHESIS PROTEIN II	ACINETOBACTER CALCOACETICUS	40-74								
PPRCA_ANAVA	CALCIUM DEPENDENT PROTEASE PRECURSOR	ANABAENA VARIABILIS	371-398								
PPRCA_THEAC	PROTEASOME, ALPHA SUBUNIT	THERMOPLASMA ACIDOPHILUM	88-115								
PPRC_ECOLI	TAIL-SPECIFIC PROTEASE PRECURSOR	ESCHERICHIA COLI	158-192	366-393							
PPRE1_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	27-78	152-179	264-347						
PPRE2_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	48-75	181-208	310-361	366-393					
PPREA_LACPL	PLASMID RECOMBINATION ENZYME	LACTOBACILLUS PLANTARUM	37-71	291-318							
PPRE_BACLI	REGULATORY PROTEIN	BACILLUS LICHENIFORMIS	2-40								
PPRE_BACSP	PLASMID RECOMBINATION ENZYME	BACILLUS SP	181-224	288-345							
PPRE_STRAG	PLASMID RECOMBINATION ENZYME	STREPTOCOCCUS AGALACTIAE	285-319	332-359	420-454						
PPRFA_LISMO	LISTERIOLYSIN REGULATORY PROTEIN	LISTERIA MONOCYTOGENES	76-110	173-204							
PPRIA_ECOLI	PRIMOSOMAL PROTEIN N'	ESCHERICHIA COLI	218-245								
PPRIM_BACSU	DNA PRIMASE	BACILLUS SUBTILIS	383-433								
PPRIM_BUCAP	DNA PRIMASE	BUCHNERA APHIDICOLA	13-43	282-319							
PPRIM_CLOAB	DNA PRIMASE	CLOSTRIDIUM ACETOBUTYLICUM	87-114								
PPRIM_LACLA	DNA PRIMASE	LACTOCOCCUS LACTIS	269-296								
PPRIM_RICPR	DNA PRIMASE	RICKETTSIA PROWAZEKII	10-37	245-286	477-504	526-593					
PPRIS_DESDE	PRISMANE PROTEIN	DESULFOVIBRIO DESULFURICANS	30-57								
PPRLB_ACHLY	BETA-LYTIC METALLOENDOPEPTIDASE	ACHROMOBACTER LYTICUS	317-344								
PPRLB_LYSEN	BETA-LYTIC METALLOENDOPEPTIDASE	LYSOBACTER ENZYMOGENES	121-148								
PPRO1_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145	275-316							
PPRO2_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145								
PPROA_SERMA	GAMMA-GLUTAMYL PHOSPHATE REDUCTASE	SERRATIA MARCESCENS	309-336								
PPROA_STAAU	PROTEIN A PRECURSOR	STAPHYLOCOCCUS AUREUS	2-29								
PPROB_SERMA	GLUTAMATE 5-KINASE	SERRATIA MARCESCENS	7-34								
PPROB_STRAG	PROTEIN B	STREPTOCOCCUS AGALACTIAE	58-85								
PPROC_PSEAE	PYRROLINE-5-CARBOXYLATE REDUCTASE	PSEUDOMONAS AERUGINOSA	148-175								
PPROH_BACSU	PYRROLINE-5-CARBOXYLATE REDUCTASE HOMOL	BACILLUS SUBTILIS	200-227								
PPROP_ECOLI	PROLINE/BETAINE TRANSPORTER	ESCHERICHIA COLI	460-487								
PPROV_ECOLI	PERIPHERAL MEMBRANE PROTEIN PROV	ESCHERICHIA COLI	24-54								
PPROV_SALTY	PERIPHERAL MEMBRANE PROTEIN PROV	SALMONELLA TYPHIMURIUM	24-54								
PPRRB_ECOLI	PRRB PROTEIN	ESCHERICHIA COLI	170-197								
PPRRC_ECOLI	ANTICODON NUCLEASE	ESCHERICHIA COLI	282-309								
PPRRD_ECOLI	PRRD PROTEIN	ESCHERICHIA COLI	278-305								
PPRSA_BACSU	PROTEIN EXPORT PROTEIN PRSA PRECURSOR	BACILLUS SUBTILIS	52-87	95-157							
PPRTA_STRGR	PROTEASE A PRECURSOR	STREPTOMYCES GRISEUS	56-110								
PPRTC_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	103-130								
PPRTC_PORGI	COLLAGENASE PRECURSOR	PORPHYROMONAS GINGIVALIS	285-312								
PPRTD_ERWCH	PROTEASES SECRETION PROTEIN PRTD	ERWINIA CHRYSANTHEMI	328-355								
PPRTE_BACNO	EXTRACELLULAR SERINE PROTEASE PRECURSOR	BACTEROIDES NODOSUS	106-133	219-265	346-384						
PPRTE_ERWCH	PROTEASES SECRETION PROTEIN PRTE	ERWINIA CHRYSANTHEMI	108-135	158-192	231-290						
PPRTF_ERWCH	PROTEASES SECRETION PROTEIN PRTF	ERWINIA CHRYSANTHEMI	280-310								
PPRTM_LACLA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	76-103	112-139							
PPRTM_LACLC	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	26-53	76-103	112-139						
PPRTM_LACPA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOBACILLUS PARACASEI	76-103	112-139							
PPRTS_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	376-417	1007-1041						
PPRTT_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	464-491	1007-1041						
PPRTX_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	314-341								
PPSAA_SYNEN	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS ELONGATUS NAEGEL	120-147		1						
PPSAA_SYNP2	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS SP	109-136	326-356							
PPSAA_SYNVU	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS VULCANUS	120-147								
PPSAA_SYNY3	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCYSTIS SP	44-71	120-147	338-368						
PPSAD_YERPE	CHAPERONE PROTEIN PSAD PRECURSOR	YERSINIA PESTIS	244-271								
PPSAD_SYNP6	PHOTOSYSTEM I REACTION CENTRE SUBUNIT II	SYNECHOCOCCUS SP	11-38								
PPSAE_YERPE	PSAE PROTEIN PRECURSOR	YERSINIA PESTIS	66-118								

BAD ORIGINAL

PCGENE	Identified	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPSBO_ANANI	STABILIZING POLYPEPTIDE PRECURSOR	ANACYSTIS NIDULANS	99-126	209-243							
PPSPA_ECOLI	PHAGE SHOCK PROTEIN A	ESCHERICHIA COLI	53-82								
PPSRA_WOLSU	POLYSULFIDE REDUCTASE CHAIN A PRECURSOR	WOLINELLA SUCCINOGENES	114-141								
PPSTS_ECOLI	PHOSPHATE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	40-74								
PPTI_BACSU	PHOSPHOTRANSFERASE	BACILLUS SUBTILIS	26-60								
PPTI_ECOLI	PHOSPHOTRANSFERASE	ESCHERICHIA COLI	135-162	399-426							
PPTI_SALTY	PHOSPHOTRANSFERASE	SALMONELLA TYPHIMURIUM	232-259	399-426							
PPTI_STACA	PHOSPHOTRANSFERASE	STAPHYLOCOCCUS CARNOSUS	34-61								
PPTI_STRSL	PHOSPHOTRANSFERASE	STREPTOCOCCUS SALIVARIUS	34-61	198-232							
PPT2B_ERWCH	PHOSPHOTRANSFERASE ENZYME II	ERWINIA CHRYSANTHEMI	127-154								
PPT2G_BACSU	PHOSPHOTRANSFERASE ENZYME II	BACILLUS SUBTILIS	670-697								
PPT2L_LACCA	PHOSPHOTRANSFERASE ENZYME II	LACTOBACILLUS CASEI	537-564								
PPT2L_LACLA	PHOSPHOTRANSFERASE ENZYME II	LACTOCOCCUS LACTIS	183-214	409-436							
PPT2L_STAAU	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS AUREUS	421-448	530-557							
PPT2M_ECOLI	PHOSPHOTRANSFERASE ENZYME II	ESCHERICHIA COLI	445-489								
PPT2M_STACA	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS CARNOSUS	388-415								
PPT2N_ECOLI	N-ACETYLGLUCOSAMINE-PERMEASE	ESCHERICHIA COLI	370-400								
PPT2S_STRMU	PHOSPHOTRANSFERASE ENZYME II	STREPTOCOCCUS MUTANS	600-627								
PPT2F_SALTY	PHOSPHOTRANSFERASE FPR PROTEIN	SALMONELLA TYPHIMURIUM	107-134								
PPT3L_LACCA	PHOSPHOTRANSFERASE FACTOR III	LACTOBACILLUS CASEI	40-67								
PPT3P_ECOLI	PHOSPHOCARRIER PROTEIN HPR	ESCHERICHIA COLI &	31-65								
		SALMONELLA TYPHIMURIUM									
PPTHP_KLEPN	PHOSPHOCARRIER PROTEIN HPR	KLEBSIELLA PNEUMONIAE	31-65								
PPTRB_ECOLI	PROTEASE II	ESCHERICHIA COLI	94-121	217-251							
PPULA_KLEAE	PULLULANASE	KLEBSIELLA AEROGENES	894-928								
PPULA_KLEPN	PULLULANASE	KLEBSIELLA PNEUMONIAE	894-928								
PPULO_KLEPN	LEADER PEPTIDASE	KLEBSIELLA PNEUMONIAE	178-205								
PPULS_KLEPN	PULS PRECURSOR	KLEBSIELLA PNEUMONIAE	76-97								
PPUPA_PSEPU	UPTAKE PROTEIN PRECURSOR	PSEUDOMONAS PUTIDA	112-162	210-237	429-461	736-763					
PPUR1_BACSU	AMIDOPHOSPHORIBOSYLTRANSF PREC	BACILLUS SUBTILIS	394-421								
PPUR2_BACSU	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE	BACILLUS SUBTILIS	349-376								
PPUR3_BACSU	FORMYLTRANSFERASE	BACILLUS SUBTILIS	149-176								
PPUR3_ECOLI	FORMYLTRANSFERASE	ESCHERICHIA COLI	27-54								
PPUR4_BACSU	SYNTHASE I	BACILLUS SUBTILIS	18-45								
PPUR5_BACSU	CYCLO-LIGASE	BACILLUS SUBTILIS	153-194								
PPUR6_ECOLI	AIR CARBOXYLASE	ESCHERICHIA COLI	131-158								
PPUR7_BACSU	SAICAR SYNTHETASE	BACILLUS SUBTILIS	3-43								
PPUR8_BACSU	ADENYLOSUCCINATE LYASE	BACILLUS SUBTILIS	56-130	226-253							
PPUR8_ECOLI	ADENYLOSUCCINATE LYASE	ESCHERICHIA COLI	194-221	331-372							
PPUR9_BACSU	AICAR TRANSFORMYLASE	BACILLUS SUBTILIS	19-53	345-372							
PPUR9_ECOLI	AICAR TRANSFORMYLASE	ESCHERICHIA COLI	239-268								
PPUR9_SALTY	AICAR TRANSFORMYLASE	SALMONELLA TYPHIMURIUM	218-247								
PPURL_BACSU	SYNTHASE II	BACILLUS SUBTILIS	609-636								
PPYG1_ANASP	LINKER POLYPEPTIDE CPCG1	ANABAENA SP	88-115								
PPYG1_MASLA	LINKER POLYPEPTIDE CPCG1	MASTIGOCLADUS LAMINOSUS	89-116								
PPYG2_ANASP	LINKER POLYPEPTIDE CPCG2	ANABAENA SP	88-115								
PPYG2_MASLA	LINKER POLYPEPTIDE CPCG2	MASTIGOCLADUS LAMINOSUS	89-116								
PPYG3_MASLA	LINKER POLYPEPTIDE CPCG3	MASTIGOCLADUS LAMINOSUS	91-132								
PPYG4_ANASP	LINKER POLYPEPTIDE CPCG4	ANABAENA SP	90-131								
PPYR1_ANASP	32.1 KD LINKER POLYPEPTIDE	ANABAENA SP	35-62								
PPYR2_FREDI	27.9 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	105-132								
PPYR4_FREDI	31.6 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	22-46								
PPYR5_FREDI	31.5 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	106-143								
PPYR6_FREDI	30.8 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	43-70	113-140							
PPYRB_BACSU	ASPARTATE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	9-36								
PPYRB_SERMA	ASPARTATE CARBAMOYLTRANSFERASE	SERRATIA MARCESCENS	70-97								
PPYRD_ECOLI	DIHYDROOROTATE DEHYDROGENASE	ESCHERICHIA COLI	113-142								

BAD ORIGINAL

PCGENE	1071178t4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
ILE_NADE	PROTEIN	ORGANISM								
PPYRD_SALTY	DIHYDROOROTATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	115-142	183-210						
PPYRD_BACSU	CTP SYNTHASE	BACILLUS SUBTILIS	275-302	322-349						
PPYS1_FREDI	PHYCOBILISOME 9 7 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	21-48							
POOR_ECOLI	QUINONE OXIDOREDUCTASE	ESCHERICHIA COLI	180-215							
PQUEA_ECOLI	QUEUOSINE BIOSYNTHESIS PROTEIN QUEA	ESCHERICHIA COLI	234-261							
PRUBR_CLOPA	14 2 KD PROTEIN IN RUBREDOXIN OPERON	CLOSTRIDIUM PASTEURIANUM	23-50	155-232						
PRACC_ECOLI	RACC PROTEIN	ESCHERICHIA COLI	5-32							
PRACD_STRTR	ASPARTATE RACEMASE	STREPTOCOCCUS THERMOPHILUS	152-189							
PRACX_BACSU	PROBABLE AMINO ACID RACEMASE	BACILLUS SUBTILIS	132-162							
PRAFA_ECOLI	ALPHA-GALACTOSIDASE	ESCHERICHIA COLI	89-116							
PRAFD_ECOLI	RAFFINOSE INVERTASE	ESCHERICHIA COLI	348-375							
PRBSC_ECOLI	RIBOSE TRANSPORT SYSTEM COMPONENT	ESCHERICHIA COLI	65-99	195-222						
PRBSK_ECOLI	RIBOKINASE	ESCHERICHIA COLI	200-239							
PRBTR_KLEAE	RIBITOL (RBT) OPERON REPRESSOR	KLEBSIELLA AEROGENES	6-47							
PRCSA_ECOLI	BIOSYNTHESIS ACTIVATION PROTEIN A	ESCHERICHIA COLI	170-197							
PRCSA_ERWAM	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA AMYLOVORA	92-119	174-201						
PRCSA_ERWST	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA STEWARTII	174-201							
PRCSA_KLEAE	BIOSYNTHESIS ACTIVATION PROTEIN A	KLEBSIELLA AEROGENES	168-205							
PRCSB_ECOLI	CAPSULE SYNTHESIS B COMPONENT	ESCHERICHIA COLI	14-41	159-186						
PREC2_LEGPN	RECA PROTEIN	LEGIONELLA PNEUMOPHILA	262-310							
PRECA_ACHLA	RECA PROTEIN	ACHOLEPLASMA LAIDLAWII	281-310							
PRECA_AGRTU	RECA PROTEIN	AGROBACTERIUM TUMEFACIENS	1-30	132-159	281-308					
PRECA_ANAVA	RECA PROTEIN	ANABAENA VARIABILIS	322-349							
PRECA_AQUPY	RECA PROTEIN	AQUIFEX PYROPHILUS	61-90	126-153						
PRECA_BACFR	RECA PROTEIN	BACTEROIDES FRAGILIS	108-135							
PRECA_BACSU	RECE PROTEIN	BACILLUS SUBTILIS	267-294							
PRECA_BRUAB	RECA PROTEIN	BRUCELLA ABORTUS	1-30	132-159	286-307					
PRECA_BURCE	RECA PROTEIN	BURKHOLDERIA CEPACIA	75-109							
PRECA_ERWCA	RECA PROTEIN	ERWINIA CAROTOVORA	284-311							
PRECA_LACDE	RECA PROTEIN	LACTOBACILLUS DELBRUECKII	20-47							
PRECA_LACHE	RECA PROTEIN	LACTOBACILLUS HELVETICUS	20-47							
PRECA_LACLA	RECA PROTEIN	LACTOCOCCUS LACTIS	135-162	232-269	288-315					
PRECA_METCL	RECA PROTEIN	METHYLOMONAS CLARA	266-303							
PRECA_METFL	RECA PROTEIN	METHYLOBACILLUS FLAGELLATUM	276-303							
PRECA_MYCPU	RECA PROTEIN	MYCOPLASMA PULMONIS	30-57							
PRECA_MYCTU	RECA PROTEIN	MYCOBACTERIUM TUBERCULOSIS	749-776							
PRECA_NEIGO	RECA PROTEIN	NEISSERIA GONORRHOEAE	261-310							
PRECA_PROMI	RECA PROTEIN	PROTEUS MIRABILIS	283-310							
PRECA_PSEAE	RECA PROTEIN	PSEUDOMONAS AERUGINOSA	283-309							
PRECA_RHILP	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	1-30	131-158	286-307					
PRECA_RHLV	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	119-146	268-295						
PRECA_RHME	RECA PROTEIN	RHIZOBIUM MELILOTI	119-146	268-295						
PRECA_RHOSH	RECA PROTEIN	RHODOBACTER SPHAEROIDES	119-146							
PRECA_STRPN	RECA PROTEIN	STREPTOCOCCUS PNEUMONIAE	134-161	293-327						
PRECA_SYNP2	RECA PROTEIN	SYNECHOCOCCUS SP	124-151							
PRECA_VIBCH	RECA PROTEIN	VIBRIO CHOLERAE	290-317							
PRECF_BACSU	RECF PROTEIN	BACILLUS SUBTILIS	4-31	178-205						
PRECF_ECOLI	RECF PROTEIN	ESCHERICHIA COLI	82-109	147-174						
PRECF_PROMI	RECF PROTEIN	PROTEUS MIRABILIS	86-113							
PRECF_PSEPU	RECF PROTEIN	PSEUDOMONAS PUTIDA	84-111							
PRECF_SALTY	RECF PROTEIN	SALMONELLA TYPHIMURIUM	147-174							
PRECJ_ECOLI	EXONUCLEASE RECJ	ESCHERICHIA COLI	52-79							
PRECN_BACSU	RECOMBINATION PROTEIN	BACILLUS SUBTILIS	21-48	156-184	192-247	299-326	344-378			
PRECQ_ECOLI	DNA HELICASE RECQ	ESCHERICHIA COLI	468-495							
PRELA_ECOLI	GTP PYROPHOSPHOKINASE	ESCHERICHIA COLI	680-707							
PREMA_BACSU	REPLICATION AND MAINTENANCE PROTEIN	BACILLUS SUBTILIS	2-36	81-108						
PREMA_STAAU	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS AUREUS	2-36	81-108						

BAD ORIGINAL

PCGENE	10fs178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PREMA_STAEP	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	2-36	81-108							
PREP1_ECOLI	REPLICATION PROTEIN REPA	ESCHERICHIA COLI	50-77	90-117							
PREPA_BACSU	REPA PROTEIN	BACILLUS SUBTILIS	342-373								
PREPA_ECOLI	REPA PROTEIN	ESCHERICHIA COLI	91-118	228-255							
PREPA_NEIGO	REPLICATION PROTEIN	NEISSERIA GONORRHOEAE	57-84	138-172							
PREPB_LACPL	REPLICATION PROTEIN REPB	LACTOBACILLUS PLANTARUM	184-211								
PREPM_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	234-284								
PREPN_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	238-285								
PREPR_STRAG	REPR PROTEIN	STREPTOCOCCUS AGALACTIAE	430-467								
PREPS_STRPY	REPS PROTEIN	STREPTOCOCCUS PYOGENES	423-467								
PREPX_STAAU	REP PROTEIN	STAPHYLOCOCCUS AUREUS	111-150	172-210							
PREPY_ECOLI	REPLICATION INITIATION PROTEIN	ESCHERICHIA COLI	288-315								
PREP_CLOPE	REPLICATION PROTEIN	CLOSTRIDIUM PERFRINGENS	168-195	297-324	341-375						
PREP_ECOLI	REP HELICASE	ESCHERICHIA COLI	119-146	205-243							
PREP_LACPL	REP PROTEIN	LACTOBACILLUS PLANTARUM	119-199	260-287							
PRESP_CLOPE	RESOLVASE	CLOSTRIDIUM PERFRINGENS	68-102	151-185							
PRF2_BACSU	PROBABLE PEPTIDE CHAIN RELEASE FACTOR 2	BACILLUS SUBTILIS	34-68								
PRF2_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 2	ESCHERICHIA COLI	86-113	163-204							
PRF2_SALTY	PEPTIDE CHAIN RELEASE FACTOR 2	SALMONELLA TYPHIMURIUM	86-113	163-204							
PRF3_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 3	ESCHERICHIA COLI	180-210	443-473							
PRFAB_ECOLI	1,6-GALACTOSYLTRANSFERASE	ESCHERICHIA COLI	199-226								
PRFAG_ECOLI	BIOSYNTHESIS PROTEIN RFAG	ESCHERICHIA COLI	185-212								
PRFAJ_ECOLI	1,2-GLUCOSYLTRANSFERASE	ESCHERICHIA COLI	39-66	233-268							
PRFAJ_SALTY	1,2-GLUCOSYLTRANSFERASE	SALMONELLA TYPHIMURIUM	68-95	145-172	236-263						
PRFAK_SALTY	1,2-N-ACETYLGLUCOSAMINETRANSFERASE	SALMONELLA TYPHIMURIUM	335-369								
PRFAL_ECOLI	O-ANTIGEN LIGASE	ESCHERICHIA COLI	366-393								
PRFAL_SALTY	O-ANTIGEN LIGASE	SALMONELLA TYPHIMURIUM	326-360								
PRFAP_ECOLI	BIOSYNTHESIS PROTEIN RFAP	ESCHERICHIA COLI	8-35								
PRFAS_ECOLI	BIOSYNTHESIS PROTEIN RFAS	ESCHERICHIA COLI	62-89	184-240							
PRFAY_ECOLI	BIOSYNTHESIS PROTEIN RFAY	ESCHERICHIA COLI	18-45								
PRFAZ_ECOLI	BIOSYNTHESIS PROTEIN RFAZ	ESCHERICHIA COLI	3-30	85-112							
PRFBB_SALTY	DTDP-GLUCOSE 4,6-DEHYDRATASE	SALMONELLA TYPHIMURIUM	320-359								
PRFBM_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	313-361								
PRFBS_SALTI	PARATOSE SYNTHASE	SALMONELLA TYPHI	22-56	205-232							
PRFEA_VIBAN	PRECURSOR FOR FERRIC ANGUIBACTIN	VIBRIO ANGUILLARUM	349-376								
PRFH_ECOLI	PEPTIDE CHAIN RELEASE FACTOR HOMOLOG	ESCHERICHIA COLI	83-110								
PRGI2_BACTU	PUTATIVE GI2 SITE-SPECIFIC RECOMBINASE	BACILLUS THURINGIENSIS	15-68	190-262	310-383						
PRHAB_ECOLI	RHAMNULOKINASE	ESCHERICHIA COLI	173-202								
PRHAB_SALTY	RHAMNULOKINASE	SALMONELLA TYPHIMURIUM	173-202								
PRHAR_ECOLI	L-RHAMNOSE OPERON TRANSACTIVATOR	ESCHERICHIA COLI	10-41								
PRHAS_ECOLI	L-RHAMNOSE OPERON REG PROTEIN RHAS	ESCHERICHIA COLI	152-179								
PRHIR_RHILV	RHIR REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	206-233								
PRHLB_ECOLI	RNA HELICASE RHLB&DBA	ESCHERICHIA COLI	138-165								
PRHO_BORBU	TRANS TERM FACTOR RHO	BORRELIA BURGDORFERI	215-242	327-369							
PRIOR_BACSU	PROTEASE PROD REG PROTEIN HPR	BACILLUS SUBTILIS	82-109								
PRHSA_ECOLI	RHSA PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSB_ECOLI	RHSB PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSC_ECOLI	RHSC PROTEIN PRECURSOR	ESCHERICHIA COLI	380-414	667-694	1036-1083						
PRHSD_ECOLI	RHSD PROTEIN PRECURSOR	ESCHERICHIA COLI	671-712	1071-1098							
PRHSE_ECOLI	RHSE PROTEIN	ESCHERICHIA COLI	345-372								
PRHC_ECOLI	ACETYLTRANSFERASE	ESCHERICHIA COLI	93-127								
PRIRJ_ECOLI	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	ESCHERICHIA COLI	162-194								
PRISA_PHOLE	RIBOFLAVIN SYNTHASE ALPHA CHAIN	PHOTOBACTERIUM LEIOGNATHI	2-47	131-158							
PRISB_BACSU	RIBOFLAVIN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	8-35								
PRISB_PHOLE	RIBOFLAVIN SYNTHASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	14-41								
PRL10_STRAT	50S RIBOSOMAL PROTEIN L10	STREPTOMYCES ANTIBIOTICUS	14-72	106-133							
PRL12_SYNY3	50S RIBOSOMAL PROTEIN L12	SYNECHOCYSTIS SP	2-34								

BAD ORIGINAL

PCGENE	187a1784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	ORGANISM									
PRL12_THEMA	50S RIBOSOMAL PROTEIN L12	THERMOTOGA MARITIMA	1-35	36-46							
PRL14_BACST	50S RIBOSOMAL PROTEIN L14	BACILLUS STEAROTHERMOPHILUS	18-45								
PRL14_MICLU	50S RIBOSOMAL PROTEIN L14	MICROCOCCUS LUTEUS	18-45								
PRL14_MYCCA	50S RIBOSOMAL PROTEIN L14	MYCOPLASMA CAPRICOLUM	51-92								
PRL15_BACLI	50S RIBOSOMAL PROTEIN L15	BACILLUS LICHENIFORMIS	21-48								
PRL15_BACST	50S RIBOSOMAL PROTEIN L15	BACILLUS STEAROTHERMOPHILUS	93-134								
PRL15_BACSU	50S RIBOSOMAL PROTEIN L15	BACILLUS SUBTILIS	93-122								
PRL15_CHLTR	50S RIBOSOMAL PROTEIN L15	CHLAMYDIA TRACHOMATIS	110-144								
PRL15_ECOLI	50S RIBOSOMAL PROTEIN L15	ESCHERICHIA COLI	79-113								
PRL15_LACLA	50S RIBOSOMAL PROTEIN L15	LACTOCOCCUS LACTIS	8-35								
PRL15_METVA	50S RIBOSOMAL PROTEIN L15	METHANOCOCCUS VANNIELII	68-102								
PRL15_MYCCA	50S RIBOSOMAL PROTEIN L15	MYCOPLASMA CAPRICOLUM	61-135								
PRL16_BACST	50S RIBOSOMAL PROTEIN L16	BACILLUS STEAROTHERMOPHILUS	31-58								
PRL16_CHLTR	50S RIBOSOMAL PROTEIN L16	CHLAMYDIA TRACHOMATIS	32-86								
PRL16_HALNA	50S RIBOSOMAL PROTEIN L16	HALOARCULA MARISMORTUI	80-107								
PRL16_MYCCA	50S RIBOSOMAL PROTEIN L16	MYCOPLASMA CAPRICOLUM	61-88								
PRL19_ECOLI	50S RIBOSOMAL PROTEIN L19	ESCHERICHIA COLI	35-53								
PRL19_HALNA	50S RIBOSOMAL PROTEIN L19	HALOARCULA MARISMORTUI	101-128								
PRL19_METVA	PROBABLE 50S RIBOSOMAL PROTEIN	METHANOCOCCUS VANNIELII	45-72								
PRL1_PROVU	50S RIBOSOMAL PROTEIN L1	PROTEUS VULGARIS	136-194								
PRL1_SULSO	50S RIBOSOMAL PROTEIN L1	SULFOLOBUS SOLFATARICUS	5-32	184-211							
PRL20_ECOLI	50S RIBOSOMAL PROTEIN L20	ESCHERICHIA COLI	14-41								
PRL20_MYCFE	50S RIBOSOMAL PROTEIN L20	MYCOPLASMA FERMENTANS	14-41								
PRL21_BACSU	50S RIBOSOMAL PROTEIN L21	BACILLUS SUBTILIS	4-38								
PRL22_ECOLI	50S RIBOSOMAL PROTEIN L22	ESCHERICHIA COLI	28-55								
PRL23_METVA	50S RIBOSOMAL PROTEIN L23	METHANOCOCCUS VANNIELII	30-57								
PRL23_MYCCA	50S RIBOSOMAL PROTEIN L23	MYCOPLASMA CAPRICOLUM	32-59								
PRL24_HALMA	50S RIBOSOMAL PROTEIN L24	HALOARCULA MARISMORTUI	48-75								
PRL24_METVA	50S RIBOSOMAL PROTEIN L24	METHANOCOCCUS VANNIELII	61-90								
PRL24_MICLU	50S RIBOSOMAL PROTEIN L24	MICROCOCCUS LUTEUS	36-63								
PRL29_CHLTR	50S RIBOSOMAL PROTEIN L29	CHLAMYDIA TRACHOMATIS	39-66								
PRL29_ECOLI	50S RIBOSOMAL PROTEIN L29	ESCHERICHIA COLI	36-63								
PRL29_MYCCA	50S RIBOSOMAL PROTEIN L29	MYCOPLASMA CAPRICOLUM	39-85								
PRL4_BACST	50S RIBOSOMAL PROTEIN L4	BACILLUS STEAROTHERMOPHILUS	141-168								
PRL4_MYCCA	50S RIBOSOMAL PROTEIN L4	MYCOPLASMA CAPRICOLUM	144-198								
PRL5_THETH	50S RIBOSOMAL PROTEIN L5	THERMUS AQUATICUS	38-65								
PRL6_BACST	50S RIBOSOMAL PROTEIN L6	BACILLUS STEAROTHERMOPHILUS	79-106								
PRL6_ECOLI	50S RIBOSOMAL PROTEIN L6	ESCHERICHIA COLI	19-46								
PRL6_METVA	50S RIBOSOMAL PROTEIN L6	METHANOCOCCUS VANNIELII	129-159								
PRL9_BACST	50S RIBOSOMAL PROTEIN L9	BACILLUS STEAROTHERMOPHILUS	47-77								
PRL9_ECOLI	50S RIBOSOMAL PROTEIN L9	ESCHERICHIA COLI	122-149								
PRLA0_HALCU	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	HALOBACTERIUM CUTIRUBRUM	138-182								
PRLA0_HALHA	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	HALOBACTERIUM HALOBIUM	138-182								
PRLA0_HALMA	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	HALOARCULA MARISMORTUI	64-91	153-184							
PRLA0_METVA	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	METHANOCOCCUS VANNIELII	194-221								
PRLA_HALEU	RIBOSOMAL PROTEIN 'A'	HALOPHILIC EUBACTERIUM NRCC 41227	39-86								
PRLA_HALJA	50S RIBOSOMAL PROTEIN L20	HALOBACTERIUM HALOBIUM	2-29								
PRLA_HALMA	50S RIBOSOMAL PROTEIN L12	HALOARCULA MARISMORTUI	2-29								
PRLA_METVA	RIBOSOMAL PROTEIN 'A'	METHANOCOCCUS VANNIELII	2-29								
PRLA_MICLU	70S RIBOSOMAL PROTEIN HA	MICROCOCCUS LUTEUS	55-82	90-117							
PRLX1_SALTY	43 KD RELAXATION PROTEIN	SALMONELLA TYPHIMURIUM	226-260								
PRLX1_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	102-132	177-218	266-300					
PRLX2_SALTY	22 KD RELAXATION PROTEIN	SALMONELLA TYPHIMURIUM	19-53								
PRLX3_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	102-133	261-295						
PRLX3_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	146-316							
PRLX_SULSO	50S RIBOSOMAL PROTEIN LX	SULFOLOBUS SOLFATARICUS	32-62								
PRNRR_BACAM	RIBONUCLEASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	33-67	129-136							

BAD ORIGINAL

PCGENE	107a178a4	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRNC_ECOLI	RIBONUCLEASE III	ESCHERICHIA COLI	10-37	117-144							
PRNE_ECOLI	RIBONUCLEASE E	ESCHERICHIA COLI	413-440	628-662							
PRNPA_BUCAP	RIBONUCLEASE P PROTEIN COMPONENT	BUCHNERA APHIDICOLA	85-114								
PRNPH_BACSU	RIBONUCLEASE PH	BACILLUS SUBTILIS	159-186								
PRNS_ECOLI	REGULATORY PROTEIN RNS	ESCHERICHIA COLI	116-160								
PRN_BACCI	RIBONUCLEASE	BACILLUS CIRCULANS	82-109								
PRN_BACIN	RIBONUCLEASE PRECURSOR	BACILLUS INTERMEDIUS	38-72								
PRP28_BACTK	RNA POLYMERASE SIGMA-28 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	73-107								
PRP32_CITFR	RNA POLYMERASE SIGMA-32 FACTOR	CITROBACTER FREUNDII	30-57								
PRP35_BACTK	RNA POLYMERASE SIGMA-35 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	8-35	63-90							
PRP54_ALCEU	RNA POLYMERASE SIGMA-54 FACTOR	ALCALIGENES EUTROPHUS	229-266								
PRP54_AZOCA	RNA POLYMERASE SIGMA-54 FACTOR	AZORHIZOBIUM CAULINODANS	174-208								
PRP54_BACSU	RNA POLYMERASE SIGMA-54 FACTOR	BACILLUS SUBTILIS	16-43	97-124	274-308	396-423					
PRP54_BRAJA	RNA POLYMERASE SIGMA-54 FACTOR 1	BRADYRHIZOBIUM JAPONICUM	97-124								
PRP54_KLEPN	RNA POLYMERASE SIGMA-54 FACTOR	KLEBSIELLA PNEUMONIAE	148-182								
PRP54_RHOCA	RNA POLYMERASE SIGMA-54 FACTOR	RHODOBACTER CAPSULATUS	155-185								
PRP55_BRAJA	RNA POLYMERASE SIGMA-54 FACTOR 2	BRADYRHIZOBIUM JAPONICUM	145-172								
PRP5M_ALCEU	PROBABLE SIGMA(54) MODULATION PROTEIN	ALCALIGENES EUTROPHUS	21-51								
PRP5M_ECOLI	PROBABLE SIGMA(54) MODULATION PROTEIN	ESCHERICHIA COLI	21-67								
PRP5M_SALTY	PROBABLE SIGMA(54) MODULATION PROTEIN	SALMONELLA TYPHIMURIUM	21-67								
PRP70_BUCAP	RNA POLYMERASE SIGMA-70 FACTOR	BUCHNERA APHIDICOLA	69-96	109-136	173-217	228-255	303-337				
PRP70_CHLTR	RNA POLYMERASE SIGMA-70 FACTOR	CHLAMYDIA TRACHOMATIS	5-32								
PRP70_ECOLI	RNA POLYMERASE SIGMA-70 FACTOR	ESCHERICHIA COLI	327-361								
PRP70_PSEAE	RNA POLYMERASE SIGMA-70 FACTOR	PSEUDOMONAS AERUGINOSA	334-368								
PRP70_RICPR	RNA POLYMERASE SIGMA-70 FACTOR	RICKETTSIA PROWAZEKII	244-321	348-382							
PRP80_MYXXA	RNA POLYMERASE SIGMA-80 FACTOR	MYXOCOCCUS XANTHUS	208-235	318-347	359-386						
PRPCF_SYNPY	BILIN BIOSYNTHESIS PROTEIN RPCF	SYNECHOCOCCUS SP	180-207								
PRPOA_BACSU	DNA-DIRECTED RNA POLYMERASE ALPHA CHAIN	BACILLUS SUBTILIS	55-107								
PRPOA_ECOLI	A-DIRECTED RNA POLYMERASE ALPHA CHAIN	ESCHERICHIA COLI &	57-105								
		SALMONELLA TYPHIMURIUM									
PRPOA_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	HALOBACTERIUM HALOBIUM	863-904								
PRPOA_HALMO	A-DIRECTED RNA POLYMERASE SUBUNIT A	HALOCOCCUS MORRHUAE	229-270								
PRPOA_METTH	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	METHANOBACTERIUM THERMOAUTOTROPHICU	218-245	486-513	642-669						
PRPOA_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	SULFOLOBUS ACIDOCALDARIUS	222-256	500-527	693-720						
PRPOA_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A'	THERMOCOCCUS CELER	228-262								
PRPOB_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	ESCHERICHIA COLI	599-626	1011-1038							
PRPOB_MYCLE	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	MYCOBACTERIUM LEPRAE	723-760	1084-1111							
PRPOB_SALTY	A-DIRECTED RNA POLYMERASE BETA CHAIN	SALMONELLA TYPHIMURIUM	599-626	958-985	1011-1038						
PRPOB_SULAC	A-DIRECTED RNA POLYMERASE SUBUNIT B	SULFOLOBUS ACIDOCALDARIUS	160-187	255-282	534-561	827-861					
PRPOB_THEMA	A-DIRECTED RNA POLYMERASE BETA CHAIN	THERMOTOGA MARITIMA	350-377								
PRPOC_ANASP	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	ANABAENA SP	152-194								
PRPOC_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA' CHAIN	ESCHERICHIA COLI	786-813	948-994	1223-1257						
PRPOC_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOBACTERIUM HALOBIUM	175-202								
PRPOC_HALMO	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOCOCCUS MORRHUAE	27-54	117-144	207-234						
PRPOC_METTH	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	METHANOBACTERIUM THERMOAUTOTROPHICU	58-85	272-302	327-354						
PRPOC_MYCLE	A-DIRECTED RNA POLYMERASE BETA' CHAIN	MYCOBACTERIUM LEPRAE	273-300	860-887	911-938	1131-1158					
PRPOC_NOSCO	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	NOSTOC COMMUNE	150-192								
PRPOC_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	SULFOLOBUS ACIDOCALDARIUS	36-63	172-214	224-251						
PRPOC_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A"	THERMOCOCCUS CELER	21-58								
PRPOD_NOSCO	DNA-DIRECTED RNA POLYMERASE DELTA CHAIN	NOSTOC COMMUNE	72-116	402-449	539-566						
PRPOE_ECOLI	RNA POLYMERASE SIGMA-E FACTOR	ESCHERICHIA COLI	5-39								
PRPOS_ECOLI	RNA POLYMERASE SIGMA FACTOR KATF	ESCHERICHIA COLI	281-308								
PRPOU_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT B'	HALOBACTERIUM HALOBIUM	91-118								
PRPSA_AGRTU	RNA POLYMERASE SIGMA-A FACTOR	AGROBACTERIUM TUMEFACIENS	310-347	397-427							
PRPSA_ANASP	RNA POLYMERASE SIGMA-A FACTOR	ANABAENA SP	71-105								
PRPSA_CLOAB	RNA POLYMERASE SIGMA-A FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	2-29								
PRPSA_STRAU	RNA POLYMERASE SIGMA FACTOR RPOD	STREPTOMYCES AUREOFACIENS	278-305								

BAD ORIGINAL

PCGENE	107x178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRPSB_ANASP	RNA POLYMERASE SIGMA-B FACTOR	ANABAENA SP	4-31								
PRPSB_BACSU	RNA POLYMERASE SIGMA-B FACTOR	BACILLUS SUBTILIS	5-35	169-196	200-230						
PRPSB_MYXXA	RNA POLYMERASE SIGMA-B FACTOR	MYXOCOCCUS XANTHUS	47-74								
PRPSB_STIAU	RNA POLYMERASE SIGMA-B FACTOR	STIGMATELLA AURANTIACA	96-123								
PRPSC_ANASP	RNA POLYMERASE SIGMA-C FACTOR	ANABAENA SP	58-85								
PRPSD_BACSU	RNA POLYMERASE SIGMA-D FACTOR	BACILLUS SUBTILIS	192-249								
PRPSE_BACSU	RNA POLYMERASE SIGMA-E FACTOR PRECURSOR	BACILLUS SUBTILIS	63-90								
PRPSE_CLOAB	RNA POLYMERASE SIGMA-E FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	14-41	116-160							
PRPSF_BACLI	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS LICHENIFORMIS	4-31	191-248							
PRPSF_BACME	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS MEGATERIUM	191-225								
PRPSF_BACSU	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS SUBTILIS	4-31	191-248							
PRPSH_BACLI	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS LICHENIFORMIS	191-218								
PRPSH_BACSU	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS SUBTILIS	186-213								
PRPSK_BACSU	RNA POLYMERASE SIGMA-K FACTOR	BACILLUS SUBTILIS	75-109	189-216							
PRPSP_STAAU	RNA POLYMERASE SIGMA FACTOR PLAC	STAPHYLOCOCCUS AUREUS	19-46								
PRPSW_STRCO	RNA POLYMERASE SIGMA FACTOR WHIG	STREPTOMYCES COELICOLOR	232-273								
PRPSX_BACTK	POSSIBLE RNA POLYMERASE SIGMA-G FACTOR	BACILLUS THURINGIENSIS	33-60								
PRS10_ECOLI	30S RIBOSOMAL PROTEIN S10	ESCHERICHIA COLI	3-30								
PRS11_BACSU	30S RIBOSOMAL PROTEIN S11	BACILLUS SUBTILIS	8-42								
PRS13_BACSU	30S RIBOSOMAL PROTEIN S13	BACILLUS SUBTILIS	44-85								
PRS17_METVA	30S RIBOSOMAL PROTEIN S17	METHANOCOCCUS VANNIELII	34-73								
PRS1_ECOLI	30S RIBOSOMAL PROTEIN S1	ESCHERICHIA COLI	99-126	144-171							
PRS1_PROSP	30S RIBOSOMAL PROTEIN S1	PROVIDENCIA SP	39-66	265-292	349-376						
PRS1_RHIME	30S RIBOSOMAL PROTEIN S1	RHIZOBIUM MELILOTI	91-125	172-217							
PRS21_BACST	30S RIBOSOMAL PROTEIN S21	BACILLUS STEAROTHERMOPHILUS	1-28								
PRS2_SPICI	30S RIBOSOMAL PROTEIN S2	SPIROPLASMA CITRI	91-125								
PRS3_ACHLA	30S RIBOSOMAL PROTEIN S3	ACHOLEPLASMA LAIDLAWII	83-110								
PRS3_MYCCA	30S RIBOSOMAL PROTEIN S3	MYCOPLASMA CAPRICOLUM	77-106	136-163							
PRS4_ECOLI	30S RIBOSOMAL PROTEIN S4	ESCHERICHIA COLI	50-77								
PRS5_HALMA	30S RIBOSOMAL PROTEIN S5	HALOARCULA MARISMORTUI	160-187								
PRS5_MYCCA	30S RIBOSOMAL PROTEIN S5	MYCOPLASMA CAPRICOLUM	35-62	182-216							
PRS6_THETH	30S RIBOSOMAL PROTEIN S6	THERMUS AQUATICUS	16-43								
PRS7_METVA	30S RIBOSOMAL PROTEIN S7	METHANOCOCCUS VANNIELII	69-96								
PRS7_MYCLE	30S RIBOSOMAL PROTEIN S7	MYCOBACTERIUM LEPRAE	22-49								
PRS8_MICLU	30S RIBOSOMAL PROTEIN S8	MICROCOCCUS LUTEUS	103-130								
PRS8_MYCCA	30S RIBOSOMAL PROTEIN S8	MYCOPLASMA CAPRICOLUM	41-78								
PRSGA_ECOLI	FERRITIN LIKE PROTEIN	ESCHERICHIA COLI	80-107								
PRT67_ECOLI	RNA-DIRECTED DNA POLYMERASE	ESCHERICHIA COLI	225-268								
PSACB_BACAM	LEVANSUCRASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	175-202	254-281							
PSACB_BACSU	LEVANSUCRASE PRECURSOR	BACILLUS SUBTILIS	175-202	254-288							
PSACB_STRMU	LEVANSUCRASE PRECURSOR	STREPTOCOCCUS MUTANS	31-63	155-189	314-369						
PSACQ_BACLI	SACQ REGULATORY FACTOR	BACILLUS LICHENIFORMIS	2-46								
PSACT_BACSU	SACPA OPERON ANTITERMINATOR	BACILLUS SUBTILIS	102-129	189-216							
PSAGP_STRPY	STREPTOCOCCAL ACID GLYCOPROTEIN	STREPTOCOCCUS PYOGENES	294-331	362-389							
PSAOX_BACSN	SARCOSINE OXIDASE	BACILLUS SP	350-377								
PSAS2_CLOBI	SPORE PROTEIN	CLOSTRIDIUM BIFERMENTANS	17-47								
PSASG_BACCE	SPORE PROTEIN GAMMA-TYPE	BACILLUS CEREUS	31-58								
PSASG_BACST	SPORE PROTEIN GAMMA-TYPE	BACILLUS STEAROTHERMOPHILUS	37-64								
PSBCC_ECOLI	EXONUCLEASE SBCC	ESCHERICHIA COLI	218-260	337-364	535-585	622-656	778-812	821-865	915-942		
PSBCD_ECOLI	EXONUCLEASE SBCD	ESCHERICHIA COLI	137-164	334-397							
PSBM_ECOLI	SBM PROTEIN	ESCHERICHIA COLI	5-32	436-470	553-580						
PSBP_BACSU	SBP PROTEIN	BACILLUS SUBTILIS	28-55								
PSCPA_STRPY	C5A PEPTIDASE PRECURSOR	STREPTOCOCCUS PYOGENES	126-160	784-811	831-880						
PSCRB_KLEPN	SUCROSE-6-PHOSPHATE HYDROLASE	KLEBSIELLA PNEUMONIAE	174-201								
PSCRB_LACLA	SUCROSE-6-PHOSPHATE HYDROLASE	LACTOCOCCUS LACTIS	182-217	354-385	395-422						
PSCRB_STRMU	SUCROSE-6-PHOSPHATE HYDROLASE	STREPTOCOCCUS MUTANS	335-362								
PSCRK_SALTH	FRUCTOKINASE	SALMONELLA THOMPSON	97-124								

BAD ORIGINAL

PCGENE	1071178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PSCRK_SALTY	FRUCTOKINASE	SALMONELLA TYPHIMURIUM	180-210								
PSCRY_KLEPN	SUCROSE PORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	61-88	240-267							
PSCRY_SALTY	SUCROSE PORIN PRECURSOR	SALMONELLA TYPHIMURIUM	16-34	61-88	240-267						
PSECA_BACSU	PREPROTEIN TRANSLOCASE SECA SUBUNIT	BACILLUS SUBTILIS	12-39	326-360							
PSECA_ECOLI	PREPROTEIN TRANSLOCASE SECA SUBUNIT	ESCHERICHIA COLI	360-387	453-481							
PSECB_ECOLI	PROTEIN-EXPORT PROTEIN SECB	ESCHERICHIA COLI	61-68								
PSECD_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECD	ESCHERICHIA COLI	46-73	378-412							
PSECF_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECF	ESCHERICHIA COLI	174-201								
PSECY_ECOLI	PREPROTEIN TRANSLOCASE SECY SUBUNIT	ESCHERICHIA COLI	101-128								
PSECY_LACLA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	LACTOCOCCUS LACTIS	401-430								
PSECY_METVA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	METHANOCOCCUS VANNIELII	131-161	396-423							
PSECY_STACA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	STAPHYLOCOCCUS CARNOSUS	148-191								
PSEFC_SALEN	SEFC PROTEIN PRECURSOR	SALMONELLA ENTERITIDIS	137-164	475-515							
PSERA_BACSU	D-3-PHOSPHOGLYCERATE DEHYDROGENASE	BACILLUS SUBTILIS	16-43	347-374							
PSFAA_ECOLI	S-FIMBRIAL PROTEIN SUBUNIT PRECURSOR	ESCHERICHIA COLI	11-38								
PSFSA_ECOLI	SUGAR FERMENTATION STIMULATION PROTEIN	ESCHERICHIA COLI	81-115								
PSFUA_SERMA	IRON-TRANSPORT SFUA PROTEIN PRECURSOR	SERRATIA MARCESCENS	34-61								
PSHUI_ECOLI	SHUTTLON PROTEIN A	ESCHERICHIA COLI	224-262								
PSHU2_ECOLI	SHUTTLON PROTEIN A'	ESCHERICHIA COLI	224-262								
PSHU3_ECOLI	SHUTTLON PROTEIN B	ESCHERICHIA COLI	224-262								
PSHU4_ECOLI	SHUTTLON PROTEIN B'	ESCHERICHIA COLI	224-262								
PSHU5_ECOLI	SHUTTLON PROTEIN C	ESCHERICHIA COLI	224-262	402-429							
PSHU6_ECOLI	SHUTTLON PROTEIN C'	ESCHERICHIA COLI	224-262								
PSHU7_ECOLI	SHUTTLON PROTEIN D'	ESCHERICHIA COLI	224-262								
PSINA_BACLI	SINA PROTEIN	BACILLUS LICHENIFORMIS	9-36	43-80							
PSINA_BACSU	SINA PROTEIN	BACILLUS SUBTILIS	9-36	43-70							
PSLJA_ACEKI	CELL SURFACE PROTEIN PRECURSOR	ACETOGENIUM KIVUI	237-264	282-309	313-453	458-489	517-544	563-593	641-685	726-753	
PSLPA_ECOLI	PROPHAGE CP4-57 INTEGRASE	ESCHERICHIA COLI	93-136								
PSNIF_ECOLI	SNIF PROTEIN	ESCHERICHIA COLI	24-51								
PSNIPA_ECOLI	SNIALL PROTEIN D	ESCHERICHIA COLI	27-61	90-117							
PSNIP_ECOLI	SNIP PROTEIN PRECURSOR	ESCHERICHIA COLI	71-98								
PSNTB_SYNP7	TRANSCRIPTIONAL REPRESSOR SNTB	SYNECHOCOCCUS SP	62-96								
PSODF_COXBU	SUPEROXIDE DISMUTASE	COXIELLA BURNETII	116-143								
PSODF_ECOLI	SUPEROXIDE DISMUTASE	ESCHERICHIA COLI	115-142								
PSODF_METTH	SUPEROXIDE DISMUTASE	METHANOBACTERIUM THERMOAUTOTROPHICU	25-52								
PSODF_PHOLE	SUPEROXIDE DISMUTASE	PHOTOBACTERIUM LEIOGNATHI	22-63								
PSODM_PROFR	SUPEROXIDE DISMUTASE	PROPIONIBACTERIUM FREUDENREICHII	164-191								
PSOHB_ECOLI	SOHB PROTEIN PRECURSOR	ESCHERICHIA COLI	7-48	70-97	273-300						
PSOPB_ECOLI	SOPB PROTEIN	ESCHERICHIA COLI	232-279								
PSOXR_ECOLI	SOXR PROTEIN	ESCHERICHIA COLI	16-63								
PSPOJ_BACSU	STAGE 0 SPORULATION PROTEIN J	BACILLUS SUBTILIS	131-158								
PSP1A_BACME	STAGE II SPORULATION PROTEIN AA	BACILLUS MEGATERIUM	19-53								
PSP1A_BACSU	STAGE II SPORULATION PROTEIN AA	BACILLUS SUBTILIS	21-55								
PSP1B_BACLI	STAGE II SPORULATION PROTEIN AB	BACILLUS LICHENIFORMIS	42-69								
PSP1B_BACME	STAGE II SPORULATION PROTEIN AB	BACILLUS MEGATERIUM	36-73								
PSP1D_BACSU	STAGE II SPORULATION PROTEIN D	BACILLUS SUBTILIS	134-161								
PSP1G_BACTK	POSSIBLE ASPARTYL PROTEASE	BACILLUS THURINGIENSIS	4-36	117-144							
PSP1J_BACSU	STAGE II SPORULATION PROTEIN J	BACILLUS SUBTILIS	14-44	463-500							
PSP1D_BACSU	STAGE III SPORULATION PROTEIN D	BACILLUS SUBTILIS	9-36	52-86							
PSP1J_BACSU	STAGE III SPORULATION PROTEIN J PRECURSOR	BACILLUS SUBTILIS	44-75								
PSP1A_BACSU	STAGE IV SPORULATION PROTEIN A	BACILLUS SUBTILIS	139-180								
PSP1B_BACSU	STAGE IV SPORULATION PROTEIN B	BACILLUS SUBTILIS	39-66								
PSP1G_BACSU	STAGE IV SPORULATION PROTEIN FB	BACILLUS SUBTILIS	251-278								
PSP1A_BACSU	STAGE V SPORULATION PROTEIN AF	BACILLUS SUBTILIS	9-36								
PSPAA_STRDO	ANTIGEN I	STREPTOCOCCUS DOWNEI	184-218								
PSPAB_BACSU	SUBTILIN BIOSYNTHESIS 117 KD PROTEIN	BACILLUS SUBTILIS	181-208								
PSPAC_BACSU	SUBTILIN BIOSYNTHESIS PROTEIN SPAC	BACILLUS SUBTILIS	311-338								

BAD ORIGINAL

PCGENE	10211784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILENAME	PROTEIN	ORGANISM							
PSPAK_BACSU	SENSOR PROTEIN SPAK	BACILLUS SUBTILIS	80-107	224-231	290-324				
PSPAP_STRMU	CELL SURFACE ANTIGEN VII PRECURSOR	STREPTOCOCCUS MUTANS	122-276	281-465	538-565	576-630	1071-1098	1135-1182	1377-1430
PSPAR_BACSU	REGULATORY PROTEIN	BACILLUS SUBTILIS	4-31	172-199					
PSPAT_BACSU	SUBTILIN TRANSPORT PROTEIN SPAT	BACILLUS SUBTILIS	55-82	226-267					
PSPEC_STRPY	EXOTOXIN TYPE C PRECURSOR	STREPTOCOCCUS PYOGENES	12-39						
PSPIR_SPICI	SPIRALIN	SPIROPLASMA CITRI	82-109	155-182					
PSPIR_SPIME	SPIRALIN	SPIROPLASMA MELLIFERUM	195-222						
PSPOT_ECOLI	GUAN-3',5'-BIS(DIPHOS) 3'-PYROPHOSPHOHYDROLA	ESCHERICHIA COLI	637-664						
PSPPA_ECOLI	PROTEASE IV	ESCHERICHIA COLI	278-305						
PSQHC_ZYMMO	SQUALENE-HOPENE CYCLASE	ZYMOMONAS MOBILIS	590-617						
PSNFA_BACSU	SUBFACTIN SYNTHETASE SUBUNIT A	BACILLUS SUBTILIS	159-186	244-271					
PSNJS_ECOLI	SIGNAL RECOGNITION PARTICLE PROTEIN	ESCHERICHIA COLI	301-328						
PSRP3_MYCMY	SIGNAL RECOGNITION PARTICLE PROTEIN	MYCOPLASMA MYCOIDES	21-65	107-141	394-428				
PSSAI_PASHA	SEROTYPE-SPECIFIC ANTIGEN I PRECURSOR	PASTEURELLA HAEMOLYTICA	131-178	358-385	465-518	529-570	860-904		
PSSAB_STRPA	ADHESIN B PRECURSOR	STREPTOCOCCUS PARASANGUIS	32-59						
PSSAB_STRSA	ADHESIN B PRECURSOR	STREPTOCOCCUS SANGUIS	21-59	101-128					
PSSB_ECOLI	SINGLE-STRAND BINDING PROTEIN	ESCHERICHIA COLI	68-95						
PSSB_PROMI	SINGLE-STRAND BINDING PROTEIN	PROTEUS MIRABILIS	63-104						
PSSB_SERMA	SINGLE-STRAND BINDING PROTEIN	SERRATIA MARCESCENS	63-104						
PSSP3_STRSA	AGGLUTININ RECEPTOR PRECURSOR	STREPTOCOCCUS SANGUIS	131-173	178-287	295-483	565-592	676-710	1081-1131	
PSTAV_STRAV	STREPTAVIDIN PRECURSOR	STREPTOMYCES AVIDINII	125-152						
PSTA_ECOLI	STREPTOTHRICIN ACETYLTRANSFERASE	ESCHERICHIA COLI	66-93						
PSTCI_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-119	172-199	280-311				
PSTCI_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-117	264-291					
PSTC_CLOBE	L-TRANSD TRANSC CONTROL PROTEIN	CLOSTRIDIUM BEIJERINCKII	47-74						
PSTPA_ECOLI	STPA PROTEIN	ESCHERICHIA COLI	36-63						
PSTRI_STRGR	INOSAMINE-PHOSPHATE AMIDINOTRANSFERASE I	STREPTOMYCES GRISEUS	183-210						
PSTRP_STREQ	STREPTOKINASE C PRECURSOR	STREPTOCOCCUS EQUISIMILIS	209-236	281-308					
PSTRP_STRPY	STREPTOKINASE A PRECURSOR	STREPTOCOCCUS PYOGENES	209-236						
PSTRP_STRSP	STREPTOKINASE G PRECURSOR	STREPTOCOCCUS SP	209-236	281-308					
PSUBE_BACSU	MINOR EXTRACELLULAR PROTEASE EPR PREC	BACILLUS SUBTILIS	435-462	522-563	603-639				
PSUBF_BACSU	BACILLOPEPTIDASE F PRECURSOR	BACILLUS SUBTILIS	40-67	89-116	121-148	554-597			
PSUBI_SALTY	SULFATE-BINDING PROTEIN	SALMONELLA TYPHIMURIUM	37-74						
PSUBI_SYNP7	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCOCCUS SP	63-94						
PSUBI_SYNY3	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCYSTIS SP	64-91						
PSUBT_BACLI	SUBTILISIN CARLSBERG PRECURSOR	BACILLUS LICHENIFORMIS	191-222						
PSUBT_BACMS	SUBTILISIN	BACILLUS MESENTERICUS	91-118						
PSUBT_BACSP	SUBTILISIN PRECURSOR	BACILLUS SP	36-63	230-277					
PSUBT_BACSA	SUBTILISIN AMYLOSACCHARITICUS PRECURSOR	BACILLUS SUBTILIS	197-224						
PSUBT_BACSD	SUBTILISIN	BACILLUS SUBTILIS	86-117						
PSUBT_BACST	SUBTILISIN J PRECURSOR	BACILLUS STEAROTHERMOPHILUS	197-224						
PSUBT_BACSU	SUBTILISIN E PRECURSOR	BACILLUS SUBTILIS	197-224						
PSUBV_BACSU	MINOR EXTRACELLULAR PROTEASE VPR PRECUR	BACILLUS SUBTILIS	55-108	613-654	741-768				
PSUCC_ECOLI	SUCCINYL-COA SYNTHETASE BETA	ESCHERICHIA COLI	62-89						
PSUCP_AGRVI	SUCROSE PHOSPHORYLASE	AGROBACTERIUM VITIS	449-476						
PSULA_ENTAE	CELL DIVISION INHIBITOR	ENTEROBACTER AEROGENES	112-139						
PSYA_ECOLI	ALANYL-TRNA SYNTHETASE	ESCHERICHIA COLI	257-287	725-752	790-821				
PSYD_ECOLI	ASPARTYL-TRNA SYNTHETASE	ESCHERICHIA COLI	330-357						
PSYE_BACST	GLUTAMYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	49-76						
PSYE_BACSU	GLUTAMYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	49-76	331-386					
PSYE_THETH	GLUTAMYL-TRNA SYNTHETASE	THERMUS AQUATICUS	405-432						
PSYFA_BACSU	PHENYLALANYL-TRNA SYNTHETASE A CHAIN	BACILLUS SUBTILIS	3-34						
PSYFB_BACSU	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	BACILLUS SUBTILIS	340-367	407-441					
PSYFB_ECOLI	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	546-573	607-634	744-771				
PSYGB_ECOLI	GLYCYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	334-381	487-514					
PSYH_STREQ	HISTIDYL-TRNA SYNTHETASE	STREPTOCOCCUS EQUISIMILIS	376-403						
PSYI_METTH	ISOLEUCYL-TRNA SYNTHETASE	METHANOBACTERIUM THERMOAUTOTROPHICU	1010-1037						

BAD ORIGINAL

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PSYK1_ECOLI	LYSYL-TRNA SYNTHETASE	ESCHERICHIA COLI	283-310								
PSYK2_ECOLI	LYSYL-TRNA SYNTHETASE, HEAT INDUCIBLE	ESCHERICHIA COLI	45-72	283-310							
PSYL_ECOLI	LEUCYL-TRNA SYNTHETASE	ESCHERICHIA COLI	220-247								
PSYM_BACST	METHIONYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	69-99								
PSYM_ECOLI	METHIONYL-TRNA SYNTHETASE	ESCHERICHIA COLI	87-124								
PSYP_ECOLI	PROLYL-TRNA SYNTHETASE	ESCHERICHIA COLI	541-568								
PSYQ_ECOLI	GLUTAMINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	394-421								
PSYRD_PSESY	SYRD PROTEIN	PSEUDOMONAS SYRINGAE	449-483								
PSYR_ECOLI	ARGINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	540-574								
PSYT1_BACSU	THREONYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	401-428	605-639							
PSYV_BACST	VALYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	603-630	809-843							
PSYV_ECOLI	VALYL-TRNA SYNTHETASE	ESCHERICHIA COLI	300-327	882-912	924-951						
PSYW_BACST	TRYPTOPHANYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	204-231	239-266							
PSYY1_BACSU	TYROSYL-TRNA SYNTHETASE 1	BACILLUS SUBTILIS	81-115	375-409							
PSYY2_BACSU	TYROSYL-TRNA SYNTHETASE 2	BACILLUS SUBTILIS	69-96								
PSYY_BACCA	TYROSYL-TRNA SYNTHETASE	BACILLUS CALDOTENAX	295-322	372-416							
PSYY_BACST	TYROSYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	295-322	372-416							
PT1M1_ECOLI	ENZYME ECOR1243 1 M PROTEIN	ESCHERICHIA COLI	126-167	405-432	485-512						
PT1R1_ECOLI	ENZYME ECOR1243 R PROTEIN	ESCHERICHIA COLI	30-57	624-651	702-736	768-795	843-870	966-1000			
PT1R_ECOLI	ENZYME ECOK 1 R PROTEIN	ESCHERICHIA COLI	158-263								
PT1S1_ECOLI	ENZYME ECOR1243 1 SPECIFICITY PROTEIN	ESCHERICHIA COLI	154-181								
PT1SA_ECOLI	ENZYME ECOA 1 SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
PT1SB_ECOLI	ENZYME ECOB 1 SPECIFICITY PROTEIN	ESCHERICHIA COLI	278-312								
PT1SD_ECOLI	ENZYME ECOD 1 SPECIFICITY PROTEIN	ESCHERICHIA COLI	249-283								
PT1SE_ECOLI	ENZYME ECOE 1 SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
PT1S_SALPO	ENZYME SPECIFICITY PROTEIN	SALMONELLA POTSDAM	396-423								
PT1S_SALTY	ENZYME SPECIFICITY PROTEIN	SALMONELLA TYPHIMURIUM	194-221	276-304	402-429						
PT2S7_ECOLI	TYPE IIS RESTRICTION ENZYME ECO57I	ESCHERICHIA COLI	138-196	265-295	406-440	639-682	687-728	926-954			
PT2A1_ACICA	TYPE II RESTRICTION ENZYME ACCI	ACINETOBACTER CALCOACETICUS	49-76								
PT2BF_BACSU	TYPE II RESTRICTION ENZYME BSUFI	BACILLUS SUBTILIS	3-43	135-223	236-280						
PT2BR_BACSU	TYPE II RESTRICTION ENZYME BSURI	BACILLUS SUBTILIS	3-45	338-384	401-430	532-559					
PT2C1_CITFR	TYPE II RESTRICTION ENZYME CFRBI	CITROBACTER FREUNDII	35-62								
PT2C1_HERAU	TYPE II RESTRICTION ENZYME HGICI	HERPETOSIPHON AURANTIACUS	176-215								
PT2C2_HERAU	TYPE II RESTRICTION ENZYME HGICII	HERPETOSIPHON AURANTIACUS	243-273								
PT2D1_DESDN	TYPE II RESTRICTION ENZYME DDEI	DESULFOVIBRIO DESULFURICANS	85-122								
PT2D1_STRPN	TYPE II RESTRICTION ENZYME DPNI	STREPTOCOCCUS PNEUMONIAE	213-240								
PT2E1_ECOLI	TYPE II RESTRICTION ENZYME ECORI	ESCHERICHIA COLI	2-29								
PT2E2_ECOLI	TYPE II RESTRICTION ENZYME ECORII	ESCHERICHIA COLI	333-360								
PT2E5_ECOLI	TYPE II RESTRICTION ENZYME ECORV	ESCHERICHIA COLI	128-155	214-241							
PT2F1_FLAOK	TYPE IIS RESTRICTION ENZYME FOKI	FLAVOBACTERIUM OKEANOKOITES	302-336								
PT2H1_HAEIN	TYPE II RESTRICTION ENZYME HINFI	HAEMOPHILUS INFLUENZAE	6-38	69-96							
PT2H1_HAEPA	TYPE II RESTRICTION ENZYME HPAI	HAEMOPHILUS PARAINFLUENZAE	77-125								
PT2H2_HAEHA	TYPE II RESTRICTION ENZYME HHAII	HAEMOPHILUS HAEMOLYTICUS	23-50								
PT2H2_HAEIN	TYPE II RESTRICTION ENZYME HINCII	HAEMOPHILUS INFLUENZAE	97-138								
PT2K1_KLEPN	TYPE II RESTRICTION ENZYME KPNI	KLEBSIELLA PNEUMONIAE	18-45	178-205							
PT2M1_MORBO	TYPE II RESTRICTION ENZYME MBOI	MORAXELLA BOVIS	15-61	187-215	225-252						
PT2M2_MORBO	TYPE IIS RESTRICTION ENZYME MBOII	MORAXELLA BOVIS	3-30	158-185	337-364						
PT2MZ_METTF	POSSIBLE TYPE II RESTRICTION ENZYME MTHZI	METHANOBACTERIUM THERMOFORMICICUM	105-151								
PT2NG_NEIGO	TYPE II RESTRICTION ENZYME NGOPII	NEISSERIA GONORRHOEAE	117-144	231-258							
PT2S1_STRSA	TYPE II RESTRICTION ENZYME STSI	STREPTOCOCCUS SANGUIS	5-32	41-68	395-446						
PT2S2_SHISO	TYPE II RESTRICTION ENZYME SSOII	SHIGELLA SONNEI	206-243	258-288							
PT2S3_STAAU	TYPE II RESTRICTION ENZYME SAU3AI	STAPHYLOCOCCUS AUREUS	70-102								
PT2SI_SALIN	TYPE II RESTRICTION ENZYME SINI	SALMONELLA INFANTIS	144-181								
PT2SM_SERMA	TYPE II RESTRICTION ENZYME SMAI	SERRATIA MARCESCENS	61-88								
PT2TA_THEAQ	TYPE II RESTRICTION ENZYME TAQI	THERMUS AQUATICUS	147-181	203-237							
PT3MO_ECOLI	SYSTEM ECOP15 ENZYME MOD	ESCHERICHIA COLI	57-71	75-102	236-296	378-405					
PT3RE_BACCE	SYSTEM ENZYME RES	BACILLUS CEREUS	62-89	256-283							

BAD ORIGINAL

PCGENE	1B7a17B14	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PTA47_TREPA	47 KD MEMBRANE ANTIGEN PRECURSOR	TREPONEMA PALLIDUM	26-53								
PTA53_TREDE	53 KD MEMBRANE ANTIGEN A PRECURSOR	TREPONEMA DENTICOLA	99-126	298-329							
PTACY_BACAL	ALVEOLYSIN PRECURSOR	BACILLUS ALVEI	272-302	374-401							
PTACY_CLOPE	PERFRINGOLYSIN O PRECURSOR	CLOSTRIDIUM PERFRINGENS	270-311	372-414							
PTACY_LISIV	IVANOLYSIN PRECURSOR	LISTERIA IVANOVII	91-120	167-195	396-423						
PTACY_LISMO	LISTERIOLYSIN O PRECURSOR	LISTERIA MONOCYTOGENES	98-125	168-196	295-329	397-424					
PTACY_LISSE	SEELIGERIOLYSIN PRECURSOR	LISTERIA SEELIGERI	99-126	296-323	349-376	398-463					
PTACY_STRPN	PNEUMOLYSIN	STREPTOCOCCUS PNEUMONIAE	234-272								
PTACY_STRPY	STREPTOLYSIN O PRECURSOR	STREPTOCOCCUS PYOGENES	86-133	335-382	440-470						
PTAGB_BACSU	TECHOIC ACID BIOSYN PROTEIN B PREC	BACILLUS SUBTILIS	42-69								
PTAGC_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN C	BACILLUS SUBTILIS	348-375								
PTAGE_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN E	BACILLUS SUBTILIS	59-93	144-181	185-243	565-592	600-637				
PTAGF_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN F	BACILLUS SUBTILIS	182-209								
PTBP1_NEIGO	TRANSFERRIN-BINDING PROTEIN 1 PRECURSOR	NEISSERIA GONORRHOEAE	39-73	137-164	398-423	810-841					
PTBUD_PSEPI	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS PICKETTII	38-65	227-254	375-402						
PTCDT_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN TCDT	SALMONELLA TYPHIMURIUM	105-132								
PTCPC_VIBCH	MEMBRANE PROTEIN TCPC PRECURSOR	VIBRIO CHOLERAE	20-47	83-128	199-233	263-290	344-375	459-486			
PTCPE_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPE	VIBRIO CHOLERAE	24-59	77-111							
PTCPF_VIBCH	TCP PILUS SECRETION PROTEIN TCPF	VIBRIO CHOLERAE	32-66	211-238							
PTCPH_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPH	VIBRIO CHOLERAE	91-122								
PTCPI_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPI	VIBRIO CHOLERAE	25-52	234-261	279-306	346-379					
PTCPM_VIBCH	TCP PILUS VIRULENCE REGULATORY PROTEIN	VIBRIO CHOLERAE	48-75								
PTCPO_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPO	VIBRIO CHOLERAE	230-257								
PTCPY_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPY	VIBRIO CHOLERAE	121-148								
PTCPZ_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPZ	VIBRIO CHOLERAE	44-85								
PTCRU_BACSU	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS SUBTILIS	404-434								
PTCR_BACST	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS STEAROTHERMOPHILUS	422-453								
PTCR_STAAU	TETRACYCLINE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	404-431								
PTCR_STRAG	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS AGALACTIAE	422-453								
PTCR_STRPN	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS PNEUMONIAE	422-453								
PTDCA_ECOLI	TDCABC OPERON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	210-239								
PTDCC_ECOLI	TDCC PROTEIN	ESCHERICHIA COLI	334-361								
PTEE6_STRPY	TRYPSIN-RESIST SURFACE T6 PROTEIN PREC	STREPTOCOCCUS PYOGENES	137-164	361-395	400-437						
PTERJ_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS B	ESCHERICHIA COLI	8-36								
PTERK_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS D	ESCHERICHIA COLI	183-210								
PTERA_ALCSP	TELLURIUM RESISTANCE PROTEIN TERA	ALCALIGENES SP	48-86								
PTES9_ECOLI	ACYL-COA THIOESTERASE II	ESCHERICHIA COLI	4-31								
PTET5_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TET5	ENTEROCOCCUS FAECALIS	2-36	130-159	179-206	217-244					
PTET9_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TET9	ENTEROCOCCUS FAECALIS	2-36	130-159	217-244	260-287					
PTETC_ECOLI	TRANSPOSON TN10 TETC PROTEIN	ESCHERICHIA COLI	72-106	116-158							
PTETM_STRLI	TETRACYCLINE RESISTANCE PROTEIN	STREPTOMYCES LIVIDANS	82-109								
PTETM_UREUR	TETRACYCLINE RESISTANCE PROTEIN TETM	UREAPLASMA UREALYTICUM	2-36	130-159	217-244	260-287					
PTETO_CAMCO	TETRACYCLINE RESISTANCE PROTEIN TETO	CAMPYLOBACTER COLI	2-29								
PTETO_CAMJE	TETRACYCLINE RESISTANCE PROTEIN TETO	CAMPYLOBACTER JEJUNI	2-36								
PTETO_STRMU	TETRACYCLINE RESISTANCE PROTEIN TETO	STREPTOCOCCUS MUTANS	2-29								
PTETX_BACTR	TETRACYCLINE RESISTANCE PROTEIN	BACTEROIDES FRAGILIS	35-62								
PTETX_CLOTE	TETANUS TOXIN PRECURSOR	CLOSTRIDIUM TETANI	274-304	540-567	615-642	692-719	985-1012	1240-1277			
PTF2B_PYRWO	TRANS INITIATION FACTOR IIB HOMOLOG	PYROCOCCUS WOESEI	218-258								
PTFDC_ALCEU	CHLOROCATECHOL 1,2-DIOXYGENASE	ALCALIGENES EUTROPHUS	2-33								
PTGT_ECOLI	QUEUINE TRNA-RIBOSYLTRANSFERASE	ESCHERICHIA COLI	173-200								
PTHDI_LACLA	THREONINE DEHYDRATASE BIOSYNTHETIC	LACTOCOCCUS LACTIS	267-303								
PTHDI_ECOLI	THREONINE DEHYDRATASE CATABOLIC	ESCHERICHIA COLI	293-320								
PTHDF_BACSU	FURAN OXIDATION PROTEIN THDF	BACILLUS SUBTILIS	153-180	192-226	282-316	391-418					
PTHDF_ECOLI	FURAN OXIDATION PROTEIN THDF	ESCHERICHIA COLI	226-260	404-431							
PTHDF_PSEPU	FURAN OXIDATION PROTEIN THDF	PSEUDOMONAS PUTIDA	226-260								
PTHER_BACCE	THERMOLYSIN	BACILLUS CEREUS	4-38	240-267							
PTHER_BACST	THERMOLYSIN PRECURSOR	BACILLUS STEAROTHERMOPHILUS	45-72								

BAD ORIGINAL

PCGENE	107a178a4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTHER_BACTH	THERMOLYSIN	BACILLUS THERMOPROTEOLYTICUS	86-113								
PTHET_THEVU	THERMITASE	THERMOACTINOMYCES VULGARIS	131-161								
PTHIC_ECOLI	THIC PROTEIN	ESCHERICHIA COLI	232-263	301-328							
PTHIG_ECOLI	THIG PROTEIN	ESCHERICHIA COLI	138-165								
PTHPS_SULAC	THERMOPSIN PRECURSOR	SULFOLOBUS ACIDOCALDARIUS	135-172	199-233							
PTHRC_BRELA	THREONINE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	288-315								
PTHTR_SACER	PUTATIVE THIOSULFATE SULFURTRANSFERASE	SACCHAROPOLYSPORA ERYTHRAEA	69-96								
PTIG_ECOLI	TRIGGER FACTOR	ESCHERICHIA COLI	144-171								
PTMPA_TREPA	TREPONEMAL MEMBRANE PROTEIN A PRECURSOR	TREPONEMA PALLIDUM	236-266								
PTMPB_TREPA	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PALLIDUM	44-71								
PTMPB_TREPH	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PHAGEDENIS	41-68								
PTNAB_ECOLI	LOW AFFINITY TRYPTOPHAN PERMEASE	ESCHERICHIA COLI	74-108								
PTNP4_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	52-79	322-349							
PTNP7_ENTFA	TRANSPOSON TN917 RESOLVASE	ENTEROCOCCUS FAECALIS	59-97	111-138							
PTNPA_STAAU	TRANSPOSASE A	STAPHYLOCOCCUS AUREUS	151-178								
PTNPB_STAAU	TRANSPOSASE B	STAPHYLOCOCCUS AUREUS	589-625								
PTNPI_BACTU	TNP I RESOLVASE	BACILLUS THURINGIENSIS	7-62	65-92	174-201						
PTNSB_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSB	ESCHERICHIA COLI	99-126	510-537							
PTNSC_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSC	ESCHERICHIA COLI	32-59	314-341							
PTNSD_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSD	ESCHERICHIA COLI	339-366								
PTNSE_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSE	ESCHERICHIA COLI	463-490								
PTOD1_PSEPU	TOLUENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PTOD2_PSEPU	TOLUENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PTODA_PSEPU	TOLUENE 1,2-DIOXYGENASE SYSTEM	PSEUDOMONAS PUTIDA	179-213								
PTODJ_PSEPU	TODF PRODUCT HYDRATASE	PSEUDOMONAS PUTIDA	143-170								
PTOLA_ECOLI	TOLA PROTEIN	ESCHERICHIA COLI	101-138								
PTOLC_ECOLI	OUTER MEMBRANE PROTEIN TOLC PRECURSOR	ESCHERICHIA COLI	144-178	184-211	239-266	348-375	383-443				
PTOPI_SYNP7	DNA TOPOISOMERASE I	SYNECHOCOCCUS SP	203-230								
PTORA_ECOLI	TRIMETHYLAMINE-N-OXIDE REDUCTASE	ESCHERICHIA COLI	797-824								
PTOX1_BORPE	PERTUSSIS TOXIN SUBUNIT 1 (S1) PRECURSOR	BORDETELLA PERTUSSIS	179-206								
PTOX2_BORPE	PERTUSSIS TOXIN SUBUNIT 2 (S2) PRECURSOR	BORDETELLA PERTUSSIS	58-85								
PTOXA_CLODI	TOXIN A	CLOSTRIDIUM DIFFICILE	20-88	99-159	204-231	342-369	373-414	847-962	966-994	997-1024	1348-1402
PTOXA_PSEAE	EXOTOXIN A PRECURSOR	PSEUDOMONAS AERUGINOSA	470-497								
PTOXB_CLODI	TOXIN B	CLOSTRIDIUM DIFFICILE	38-72	133-163	199-241	825-869	923-950	1334-1388	1403-1433	1506-1565	1716-1747
PTOXS_VIBCH	TRANSMEMBRANE REGULATORY PROTEIN TOXS	VIBRIO CHOLERAE	13-40								
PTPF1_TREPA	ANTIGEN TPF1	TREPONEMA PALLIDUM	106-143								
PTPIS_ECOLI	TRIOSEPHOSPHATE ISOMERASE	ESCHERICHIA COLI	83-110								
PTPIS_MORSP	TRIOSEPHOSPHATE ISOMERASE	MORAXELLA SP	139-166								
PTPR_PORGI	THIOL PROTEASE PRECURSOR	PORPHYROMONAS GINGIVALIS	117-144								
PTR1M_AGRT3	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTR1M_AGRT4	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTR1M_PSESS	TRYPTOPHAN 2-MONOOXYGENASE	PSEUDOMONAS SYRINGAE	41-68								
PTRA1_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	58-113								
PTRA2_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	11-38	58-113							
PTRA3_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	721-755								
PTRA3_RHIME	TRANSPOSASE	RHIZOBIUM MELILOTI	179-206								
PTRA3_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	33-60	68-95							
PTRA4_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	181-208	308-340	720-754						
PTRA6_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	51-78								
PTRA6_SHISO	TRANSPOSASE	SHIGELLA SONNEI	51-78	200-227	231-258						
PTRA7_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	729-756								
PTRA9_MYCTU	PUTATIVE TRANSPOSASE	MYCOBACTERIUM TUBERCULOSIS	159-186								
PTRAB_BACTB	IS231B PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_BACTB	IS231C PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	4-31	45-72							
PTRAX_BACTB	IS231 PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRA_BACTU	TRANSPOSASE	BACILLUS THURINGIENSIS	93-127	509-539							

BAD ORIGINAL

PCGENE	1973178s4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PTRA_PSEAE	TRANSPOSASE	PSEUDOMONAS AERUGINOSA	127-154	721-735							
PTRB1_ECOLI	TRAB PROTEIN	ESCHERICHIA COLI	111-143								
PTRBF_ECOLI	TRBF PROTEIN	ESCHERICHIA COLI	12-39								
PTRBI_ECOLI	TRBI PROTEIN	ESCHERICHIA COLI	70-97								
PTRC1_ECOLI	TRAC-1 PROTEIN	ESCHERICHIA COLI	1006-1051								
PTRC2_ECOLI	TRAC-2 PROTEIN	ESCHERICHIA COLI	1102-1149								
PTRC3_ECOLI	TRAC-3 PROTEIN	ESCHERICHIA COLI	884-931								
PTRD1_ECOLI	TRAD PROTEIN	ESCHERICHIA COLI	297-348								
PTREA_ECOLI	PERIPLASMIC TREHALASE PRECURSOR	ESCHERICHIA COLI	262-403	477-508							
PTREC_ECOLI	ANYLOTREHALASE	ESCHERICHIA COLI	280-307								
PTRFA_ECOLI	TRFA TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	5-32	105-132							
PTRG1_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	61-88	630-657	831-858	865-895					
PTRG5_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	196-223								
PTRG6_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	195-222	518-545							
PTRI1_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	155-209	597-624	887-914	1330-1377					
PTRI2_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	155-209	597-624	887-914	1330-1377					
PTRJ1_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI	47-74	328-371							
PTRJ2_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI	16-43								
PTRM_ECOLI	TRAM PROTEIN	ESCHERICHIA COLI	5-32								
PTRNA_ECOLI	TRNA (URACIL-5-)-METHYLTRANSFERASE	ESCHERICHIA COLI	107-137								
PTRND_ECOLI	TRNA (GUANINE-N1)-METHYLTRANSFERASE	ESCHERICHIA COLI	115-142	226-253							
PTRPA_BACSU	TRYPTOPHAN SYNTHASE ALPHA CHAIN	BACILLUS SUBTILIS	220-247								
PTRPA_CAUCR	TRYPTOPHAN SYNTHASE ALPHA CHAIN	CAULOBACTER CRESCENTUS	241-273								
PTRPA_PSEAE	TRYPTOPHAN SYNTHASE ALPHA CHAIN	PSEUDOMONAS AERUGINOSA	176-203								
PTRPB_ACICA	TRYPTOPHAN SYNTHASE BETA CHAIN	ACINETOBACTER CALCOACETICUS	79-113								
PTRPB_BACSU	TRYPTOPHAN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	286-103	318-345							
PTRPB_BRELA	TRYPTOPHAN SYNTHASE BETA CHAIN	BREVIBACTERIUM LACTOFERMENTUN	172-199								
PTRPB_LACCA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOBACILLUS CASEI	83-117								
PTRPB_LACLA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOCOCCUS LACTIS	77-104	164-191							
PTRPB_VIBPA	TRYPTOPHAN SYNTHASE BETA CHAIN	VIBRIO PARAHAEMOLYTICUS	56-83								
PTRPC_BRELA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	229-256								
PTRPC_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	ESCHERICHIA COLI	205-232								
PTRPC_LACLA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	LACTOCOCCUS LACTIS	148-175								
PTRPC_VIBPA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	VIBRIO PARAHAEMOLYTICUS	146-176								
PTRPD_ACICA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	ACINETOBACTER CALCOACETICUS	223-250	260-294							
PTRPD_PSEAE	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	205-232								
PTRPD_PSEPU	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS PUTIDA	205-232								
PTRPD_VIBPA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	VIBRIO PARAHAEMOLYTICUS	2-29								
PTRPE_BACPU	ANTHRANILATE SYNTHASE COMPONENT I	BACILLUS PUMILUS	33-60								
PTRPE_CLOTM	ANTHRANILATE SYNTHASE COMPONENT I	CLOSTRIDIUM THERMOCELLUM	165-226								
PTRPE_LACLA	ANTHRANILATE SYNTHASE COMPONENT I	LACTOCOCCUS LACTIS	142-191								
PTRPE_LEPBI	ANTHRANILATE SYNTHASE COMPONENT I	LEPTOSPIRA BIFLEXA	145-179								
PTRPE_RHIME	ANTHRANILATE SYNTHASE	RHIZOBIUM MELILOTI	139-166								
PTRPE_SALTY	ANTHRANILATE SYNTHASE COMPONENT I	SALMONELLA TYPHIMURIUM	191-218								
PTRPE_SULSO	ANTHRANILATE SYNTHASE COMPONENT I	SULFOLOBUS SOLFATARICUS	143-183	298-328							
PTRPF_VIBPA	ANTHRANILATE SYNTHASE COMPONENT II	VIBRIO PARAHAEMOLYTICUS	9-36	54-81							
PTRPG_ACICA	ANTHRANILATE SYNTHASE COMPONENT II	ACINETOBACTER CALCOACETICUS	12-39								
PTRPG_AZOBR	ANTHRANILATE SYNTHASE COMPONENT II	AZOSPIRILLUM BRASILENSE	4-31								
PTRPG_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	ESCHERICHIA COLI	5-32								
PTRPG_LACLA	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS	4-31								
PTRPG_PSEAE	ANTHRANILATE SYNTHASE COMPONENT II	PSEUDOMONAS AERUGINOSA	12-39								
PTRPG_SALTY	ANTHRANILATE SYNTHASE COMPONENT II	SALMONELLA TYPHIMURIUM	5-32								
PTRPG_SERMA	ANTHRANILATE SYNTHASE COMPONENT II	SERRATIA MARCESCENS	9-43								
PTRPG_SHIDY	ANTHRANILATE SYNTHASE COMPONENT II	SHIGELLA DYSENTERIAE	5-32								
PTRPO_PSEAE	PUTATIVE TRANSCRIPTIONAL REGULATOR	PSEUDOMONAS AERUGINOSA	147-174								
PTRS1_ECOLI	TRAS PROTEIN	ESCHERICHIA COLI	85-119								
PTRT1_ECOLI	RESISTANCE PROTEIN PRECURSOR	ESCHERICHIA COLI	184-221								

BAD ORIGINAL

PCGENE	10/21/1994	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PTRY1_SALTY	TRAY PROTEIN	SALMONELLA TYPHIMURIUM	30-57							
PTRYP_STRGR	TRYPSIN PRECURSOR	STREPTOMYCES GRISEUS	80-107							
PTSR_STRAZ	RUNA METHYLTRANSFERASE	STREPTOMYCES AZUREUS	126-153							
PTSST_STAAU	TOXIC SHOCK SYNDROME TOXIN-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	29-63	102-129						
PTSX_ECOLI	CHANNEL-FORMING PROTEIN TSX PRECURSOR	ESCHERICHIA COLI	223-252							
PTTK_ECOLI	HYPOTHETICAL 24.1 KD PROTEIN	ESCHERICHIA COLI	81-115							
PTUS_ECOLI	SITE-BINDING PROTEIN	ESCHERICHIA COLI	57-91	107-134						
PTYCA_BACBR	TYROCIDINE SYNTHETASE I	BACILLUS BREVIS	117-147	534-561	1019-1051					
PTYF1_TREPE	ANTIGEN TYF1	TREPONEMA PERTENUE	106-143							
PTYRA_BACSU	POSSIBLE PREPHENATE DEHYDROGENASE	BACILLUS SUBTILIS	244-271	312-342						
PTYRA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	329-370							
PTYRR_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN TYRR	ESCHERICHIA COLI	483-510							
PTYSY_LACCA	THYMIDYLATE SYNTHASE	LACTOBACILLUS CASEI	139-173							
PTYSY_LACLA	THYMIDYLATE SYNTHASE	LACTOCOCCUS LACTIS	75-109							
PTYSY_STAAU	THYMIDYLATE SYNTHASE	STAPHYLOCOCCUS AUREUS	69-96							
PUTPB_ECOLI	SENSOR PROTEIN UVRB	ESCHERICHIA COLI	276-303	316-343						
PUVRB_SALTY	SENSOR PROTEIN UVRB	SALMONELLA TYPHIMURIUM	276-303	316-343						
PUVUC_SALTY	UMUC PROTEIN	SALMONELLA TYPHIMURIUM	204-231							
PUPP_ECOLI	URACIL PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	30-57							
PURAA_ECOLI	URACIL PERMEASE	ESCHERICHIA COLI	350-384							
PURE1_HELPY	UREASE ALPHA SUBUNIT	HELICOBACTER PYLORI	15-42							
PURE1_PROMI	UREASE ALPHA SUBUNIT	PROTEUS MIRABILIS	72-99							
PURE1_PROVU	UREASE ALPHA SUBUNIT	PROTEUS VULGARIS	72-99							
PURE1_UREUR	UREASE ALPHA SUBUNIT	UREAPLASMA UREALYTICUM	113-40	483-517						
PURE2_HELPY	UREASE BETA SUBUNIT	HELICOBACTER PYLORI	62-99							
PURED_HELPY	UREASE OPERON URED PROTEIN	HELICOBACTER PYLORI	17-44							
PUREE_PROMI	UREASE ACCESSORY PROTEIN UREE	PROTEUS MIRABILIS	57-84							
PUREF_KLEAE	UREASE ACCESSORY PROTEIN UREF PRECURSOR	KLEBSIELLA AEROGENES	20-47							
PUS45_LACLA	SECRETED 45 KD PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	44-98	150-223	276-303					
PUSHA_ECOLI	P-SUGAR HYDROLASE PRECURSOR	ESCHERICHIA COLI	56-83							
PUSHA_SALTY	SILENT PROTEIN USHA(0) PRECURSOR	SALMONELLA TYPHIMURIUM	56-83							
PUVRA_ECOLI	EXCINUCLEASE ABC SUBUNIT A	ESCHERICHIA COLI	527-554	871-898						
PUVRA_MICLU	EXCINUCLEASE ABC SUBUNIT A	MICROCOCCUS LUTEUS	579-606	619-646	684-718	922-949				
PUVRA_PARDE	EXCINUCLEASE ADC SUBUNIT A	PARACOCCUS DENITRIFICANS	33-60							
PUVRC_BACSU	EXCINUCLEASE ABC SUBUNIT C	BACILLUS SUBTILIS	342-372	511-538						
PUVRC_ECOLI	EXCINUCLEASE ABC SUBUNIT C	ESCHERICHIA COLI	337-64	332-362						
PUVRD_ECOLI	HELICASE II	ESCHERICHIA COLI	280-307							
PVANA_ENTFC	VANCOMYCIN RESISTANCE PROTEIN VANA	ENTEROCOCCUS FAECIUM	182-209							
PVANC_ENTGA	VANCOMYCIN RESISTANCE PROTEIN VANC	ENTEROCOCCUS GALLINARUM	177-211							
PVIB4_AGRT5	VIRB4 PROTEIN PRECURSOR	AGROBACTERIUM TUMEFACIENS	138-172							
PVIB6_AGRT5	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227							
PVIB6_AGRT6	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227							
PVIB6_AGRT9	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227							
PVIBX_AGRT5	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239						
PVIBX_AGRT6	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	211-238						
PVIBX_AGRT9	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239						
PVIC1_AGRRA	VIRC1 PROTEIN	AGROBACTERIUM RHIZOGENES TUMEFACIENS	81-108							
PVIC1_AGRT5	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108							
PVIC1_AGRT6	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108							
PVID1_AGRRA	VIRD1 PROTEIN	AGROBACTERIUM RHIZOGENES	149-176	265-292						
PVIRA_AGRT5	WIDE HOST RANGE (WHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-76	113-147	637-664					
PVIRA_AGRT6	WIDE HOST RANGE (WHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	633-680					
PVIRA_AGRT9	WIDE HOST RANGE (WHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	633-680					
PVIRB_SHIFL	VIRB TRANSCRIPTIONAL ACTIVATOR	SHIGELLA FLEXNERI	37-71	107-134	187-214	252-291				
PVIRF_YEREN	VIRULENCE REGULON TRANSACTIVATOR	YERSINIA ENTEROCOLITICA	16-46							
PVIRG_AGRRA	VIRG REGULATORY PROTEIN	AGROBACTERIUM RHIZOGENES	34-61							
PVIRL_AGRT6	LIMITED HOST RANGE (LHR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	106-137							

BAD ORIGINAL

PCGENE	107:178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVISC_ECOLI	VISC PROTEIN	ESCHERICHIA COLI	47-74								
PVLPA_MYCHR	VARIANT SURFACE ANTIGEN A PRECURSOR	MYCOPLASMA HYORHINIS	74-112								
PVM03_BORHE	OUTER MEMBRANE LIPOPROTEIN 3 PRECURSOR	BORRELIA HERMSII	54-81								
PVM07_BORHE	OUTER MEMBRANE LIPOPROTEIN 7 PRECURSOR	BORRELIA HERMSII	332-359								
PVM21_BORHE	OUTER MEMBRANE LIPOPROTEIN 21 PRECURSOR	BORRELIA HERMSII	330-357								
PVM24_BORHE	OUTER MEMBRANE LIPOPROTEIN 24 PRECURSOR	BORRELIA HERMSII	47-143								
PVM25_BORHE	OUTER MEMBRANE LIPOPROTEIN 25 PRECURSOR	BORRELIA HERMSII	315-356								
PVNFA_AZOVI	NITROGEN FIXATION PROTEIN VNFA	AZOTOBACTER VINELANDII	158-188	218-245							
PVNFK_AZOCH	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	68-95								
PVNFK_AZOVI	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER VINELANDII	68-95	372-403							
PVRP2_SALCH	65 KD VIRULENCE PROTEIN	SALMONELLA CHOLERAE-SUIS	509-536								
PVRP2_SALDU	65 KD VIRULENCE PROTEIN	SALMONELLA DUBLIN	511-538								
PVSDE_SALDU	VIRULENCE PROTEIN VSDE	SALMONELLA DUBLIN	3-36								
PVVHB_VIBVU	CYTOLYSIN SECRETION PROTEIN	VIBRIO VULNIFICUS	30-75								
PWAPA_STRMU	WALL-ASSOCIATED PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	4-41	313-386							
PWRBA_ECOLI	TRP REPRESSOR BINDING PROTEIN	ESCHERICHIA COLI	89-116								
PX191_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PX192_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PX193_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PXISA_ANASP	EXCISASE A	ANABAENA SP	4-31	89-116	135-162						
PXPRB_ECOLI	POSSIBLE INTEGRASE/RECOMBINASE XPRB	ESCHERICHIA COLI	268-295								
PXYLA_STAXY	XYLOSE ISOMERASE	STAPHYLOCOCCUS XYLOSUS	411-438								
PXYLK_KLEAE	XYLULOSE KINASE	KLEBSIELLA AEROGENES	2-29								
PXYLK_LACPE	XYLULOSE KINASE	LACTOBACILLUS PENTOSUS	52-79	211-238	260-287						
PXYLK_STAXY	XYLULOSE KINASE	STAPHYLOCOCCUS XYLOSUS	4-31	96-130	209-236	246-273					
PXYLR_BACSU	XYLOSE REPRESSOR	BACILLUS SUBTILIS	75-102	260-287							
PXYLR_LACPE	XYLOSE REPRESSOR	LACTOBACILLUS PENTOSUS	262-289								
PXYLR_STAXY	XYLOSE REPRESSOR	STAPHYLOCOCCUS XYLOSUS	20-64	101-158	181-215	221-255	274-301				
PXYLZ_PSEPU	ELECTRON TRANSFER COMPONENT	PSEUDOMONAS PUTIDA	51-78	104-131							
PXYN4_CALSA	PUTATIVE ENDO-1,4-BETA-XYLANASE	CALDOCELLUM SACCHAROLYTICUM	198-225								
PXYNA_BACCI	O-1,4-BETA-XYLANASE PRECURSOR	BACILLUS CIRCULANS	47-74								
PXYNA_BACSS	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SP	173-200								
PXYNA_BACSU	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SUBTILIS	47-74								
PXYNA_CALSA	ENDO-1,4-BETA-XYLANASE A PRECURSOR	CALDOCELLUM SACCHAROLYTICUM	132-159	226-256							
PXYNA_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	33-82								
PXYNB_BACPU	BETA-XYLOSIDASE	BACILLUS PUMILUS	459-486								
PXYNB_CALSA	BETA-XYLOSIDASE	CALDOCELLUM SACCHAROLYTICUM	440-474								
PXYNB_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	251-278	317-344	475-502					
PXYNC_PSEFL	ALPHA-L-ARABINOFURANOSIDASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	251-278							
PXYNC_STRLI	ENDO-1,4-BETA-XYLANASE C PRECURSOR	STREPTOMYCES LIVIDANS	183-210								
PY14K_HALMO	HYPOTHETICAL 14.9 KD PROTEIN	HALOCOCCUS MORRHUAE	56-83								
PY23K_STROR	HYPOTHETICAL 23.1 KD PROTEIN	STREPTOCOCCUS ORALIS	78-105								
PYJ6K_METSM	HYPOTHETICAL 36.7 KD PROTEIN	METHANOBREVIBACTER SMITHII	128-162	172-218							
PYAAC_ECOLI	HYPOTHETICAL 34.6 KD PROTEIN	ESCHERICHIA COLI	271-298								
PYAAC_PSEFL	HYPOTHETICAL 33.9 KD PROTEIN	PSEUDOMONAS FLUORESCENS	274-301								
PYAAM_ECOLI	HYPOTHETICAL 59.1 KD PROTEIN	ESCHERICHIA COLI	45-72								
PYAAP_ECOLI	HYPOTHETICAL 56.6 KD PROTEIN	ESCHERICHIA COLI	352-379								
PYAAQ_ECOLI	HYPOTHETICAL 28.5 KD PROTEIN	ESCHERICHIA COLI	155-182								
PYABC_ECOLI	HYPOTHETICAL 34.9 KD PROTEIN	ESCHERICHIA COLI	131-158								
PYABQ_ECOLI	HYPOTHETICAL 89.7 KD PROTEIN	ESCHERICHIA COLI	446-480	627-654							
PYABN_ECOLI	HYPOTHETICAL 63.9 KD PROTEIN	ESCHERICHIA COLI	428-455								
PYAC3_PSEAE	HYPOTHETICAL 23.9 KD PROTEIN	PSEUDOMONAS AERUGINOSA	48-75	150-177							
PYAD2_CLOAB	HYPOTHETICAL 21.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	75-109	114-144							
PYAD5_CLOAB	HYPOTHETICAL 36.9 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	132-159	165-196	210-237						
PYAD6_CLOAB	HYPOTHETICAL PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	21-55								
PYADA_YEREN	INVASIN PRECURSOR	YERSINIA ENTEROCOLITICA	196-230	247-274	318-381						
PYADA_YERPS	INVASIN PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	255-282	297-360							

BAD ORIGINAL

PECGENE:	107a178a4	Prokaryotic Sequences									
ELEMNAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYADC_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	13-40	101-131							
PYAEA_RICRI	17 KD PROTEIN	RICKETTSIA RICKETTSII	107-134								
PYAFB_ECOLI	IIYPOTHETICAL 29.4 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYAFD_ECOLI	HYPOTHETICAL 29.1 KD PROTEIN	ESCHERICHIA COLI	34-71								
PYAFE_ECOLI	HYPOTHETICAL 23.0 KD PROTEIN	ESCHERICHIA COLI	122-150								
PYAIB_ESCFE	HYPOTHETICAL PROTEIN	ESCHERICHIA FERGUSONII	2-35								
PYAMI_SALTY	PUTATIVE AMIDASE	SALMONELLA TYPHIMURIUM	73-100								
PYATI_SYNY3	IIYNTHETICAL 13.0 KD PROTEIN	SYNECHOCYSTIS SP	26-60								
PYATP_MYCLE	IIYPO PROTEIN PUTATIVE ATP OPERON	MYCOBACTERIUM LEPRAE	23-57	91-138	511-538						
PYATR_BACTI	HYPOL ATP-BINDING TRANSPORT PROTEIN	BACILLUS FIRMUS	211-238								
PYATS_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	7-41								
PYATU_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	29-56	60-87							
PYAV5_XANCV	HYPOTHETICAL 30 KD AVIRULENCE PROTEIN	XANTHOMONAS CAMPESTRUS	68-98	199-226							
PYBAH_ECOLI	HYPOTHETICAL 24.8 KD PROTEIN	ESCHERICHIA COLI	49-79								
PYBBA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	6-69								
PYBED_ECOLI	HYPOTHETICAL 9.8 KD PROTEIN	ESCHERICHIA COLI	51-82								
PYBID_ECOLI	HYPOTHETICAL 14.1 KD PROTEIN	ESCHERICHIA COLI	97-124								
PYCAE_ECOLI	HYPOTHETICAL 24.5 KD PROTEIN	ESCHERICHIA COLI	34-61								
PYCBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	38-65								
PYCBL_BACUN	HYPOTHETICAL 17.3 KD PROTEIN	BACTEROIDES UNIFORMIS	66-100								
PYCEA_BACLA	HYPOTHETICAL PROTEIN	BACILLUS LAUTUS	111-138								
PYCFC_ECOLI	HYPOTHETICAL 32.9 KD PROTEIN	ESCHERICHIA COLI	52-79								
PYCHR_ALCEU	HYPOTHETICAL PROTEIN	ALCALIGENES EUTROPHUS	21-48								
PYCIB_ECOLI	HYPOTHETICAL 20.8 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYCIF_ECOLI	11.6 KD PROTEIN	ESCHERICHIA COLI	7-68	134-166							
PYCIK_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	33-62								
PYCLI_ECOLI	HYPOTHETICAL 40.3 KD PROTEIN	ESCHERICHIA COLI	34-81								
PYCPJ_SYNPY	HYPOTHETICAL 39.3 KD PROTEIN	SYNECHOCOCCUS SP	194-221								
PYCPJ_SYNY3	HYPOTHETICAL 28.0 KD PROTEIN	SYNECHOCYSTIS SP	7-34	120-154							
PYCPJ_SYNY3	HYPOTHETICAL 39.3 KD PROTEIN	SYNECHOCYSTIS SP	277-308								
PYCPG_MASLA	HYPOTHETICAL PROTEIN	MASTIGOCLADUS LAMINOSUS	2-29								
PYCPY_PSEAV	HYPO PHYCOCYANIN OPERON PROTEIN	PSEUDANABAENA SP	380-407								
PYCR3_BACTK	HYPOTHETICAL 29.1 KD PROTEIN	BACILLUS THURINGIENSIS	42-74	133-180							
PYCS5_ECOLI	HYPOTHETICAL PROTEIN PRECURSOR	ESCHERICHIA COLI	32-59								
PYCW3_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	3-30	39-86							
PYDIM_HERAU	HYPOTHETICAL 68.4 KD PROTEIN	HERPETOSIPHON AURANTIACUS	12-39	131-178	360-416						
PYDBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	32-66	117-144	161-216	233-267	295-329	458-485	676-717	1116-1163	1499-1530
PYDBD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	80-107								
PYDDB_ECOLI	HYPOTHETICAL 86.7 KD PROTEIN	ESCHERICHIA COLI	606-641	683-714	726-753						
PYDDC_ECOLI	HYPOTHETICAL 80.8 KD PROTEIN	ESCHERICHIA COLI	373-400	421-452	631-648						
PYDDD_ECOLI	HYPOTHETICAL 24.1 KD PROTEIN	ESCHERICHIA COLI	133-174								
PYDEH_ECOLI	HYPOTHETICAL 20.5 KD PROTEIN	ESCHERICHIA COLI	96-130								
PYDEJ_ECOLI	HYPOTHETICAL 18.3 KD PROTEIN	ESCHERICHIA COLI	4-38								
PYDEK_ECOLI	HYPOTHETICAL 65.5 KD PROTEIN	ESCHERICHIA COLI	333-360	524-551	565-592						
PYDNM_BORBU	HYPOTHETICAL 11.2 KD PROTEIN	BORRELIA BURGDORFERI	6-36								
PYDOI_SULSO	HYPOTHETICAL 14.7 KD PROTEIN	SULFOLOBUS SOLFATARICUS	17-58	71-103							
PYDOJ_SULSO	HYPOTHETICAL 16.9 KD PROTEIN	SULFOLOBUS SOLFATARICUS	11-38								
PYEBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	93-120								
PYEBG_ECOLI	HYPOTHETICAL 10.7 KD PROTEIN	ESCHERICHIA COLI	50-77								
PYEEE_ECOLI	HYPOTHETICAL 38.1 KD PROTEIN	ESCHERICHIA COLI	43-70								
PYEEF_ECOLI	HYPO 49.8 KD TRANSPORT PROTEIN	ESCHERICHIA COLI	147-174								
PYEGA_ECOLI	HYPOTHETICAL IN DCD 3'REGION	ESCHERICHIA COLI	145-172								
PYEHA_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	69-106	283-310							
PYEHB_ECOLI	HYPOTHETICAL 93.3 KD PROTEIN	ESCHERICHIA COLI	131-178	501-545							
PYEID_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	96-123								
PYEIIF_ECOLI	IIYPOTHETICAL 141.0 KD PROTEIN	ESCHERICHIA COLI	343-370								
PYEIII_ECOLI	IIYPOTHETICAL 138.1 KD PROTEIN	ESCHERICHIA COLI	33-70	102-129							

BAD ORIGINAL

PCGENE	1107x1178x4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYEHU_ECOLI	HYPOTHETICAL 62.1 KD PROTEIN	ESCHERICHIA COLI	326-353								
PYEIC_ECOLI	HYPOTHETICAL 33.6 KD PROTEIN	ESCHERICHIA COLI	46-80								
PYEIF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	61-88								
PYEIJ_ECOLI	HYPOTHETICAL 43.4 KD PROTEIN	ESCHERICHIA COLI	15-42								
PYEJA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	83-110								
PYEJF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	453-480								
PYEJO_ECOLI	HYPOTHETICAL 91.2 KD PROTEIN	ESCHERICHIA COLI	399-433								
PYFHD_ECOLI	HYPOTHETICAL 40.6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYFU2_BACST	HYPOTHETICAL 30.6 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	133-160								
PYFXX_BRAJA	HYPOTHETICAL PROTEIN	BRADYRHIZOBIUM JAPONICUM	109-150								
PYGAP_BACME	HYPOTHETICAL 37.7 KD PROTEIN	BACILLUS MEGATERIUM	40-67								
PYGFD_ECOLI	HYPOTHETICAL 29.4 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYGGB_ECOLI	HYPOTHETICAL 30.9 KD PROTEIN	ESCHERICHIA COLI	225-252								
PYGGQ_ECOLI	HYPOTHETICAL 31.8 KD PROTEIN	ESCHERICHIA COLI	209-236								
PYGI2_BACTU	HYPOTHETICAL 22.8 KD PROTEIN	BACILLUS THURINGIENSIS	26-61								
PYGI2_PSEPU	HYPOTHETICAL 32.4 KD PROTEIN	PSEUDOMONAS PUTIDA	145-172								
PYGIF_ECOLI	HYPOTHETICAL 48.4 KD PROTEIN	ESCHERICHIA COLI	223-264								
PYGL4_BACST	HYPOTHETICAL 35.5 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	6-33								
PYGL5_BACST	HYPOTHETICAL PROTEIN	BACILLUS STEAROTHERMOPHILUS	182-209								
PYGLN_BACCE	HYPOTHETICAL 15 KD PROTEIN	BACILLUS CEREUS	79-124								
PYGRD_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	20-47								
PYGRE_BACSU	HYPOTHETICAL 17.1 KD PROTEIN	BACILLUS SUBTILIS	84-111								
PYGRP_BACSU	HYPOTHETICAL 39.0 KD PROTEIN	BACILLUS SUBTILIS	98-125								
PYGRP_CLOAB	HYPOTHETICAL 38.8 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	160-210								
PYGT2_STRMU	HYPOTHETICAL PROTEIN 2	STREPTOCOCCUS MUTANS	4-40	110-138	235-262						
PYHAB_ECOLI	HYPOTHETICAL 20.6 KD PROTEIN	ESCHERICHIA COLI	20-66								
PYHAC_ECOLI	HYPOTHETICAL 45.2 KD PROTEIN	ESCHERICHIA COLI	69-96								
PYHAF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	44-71	138-165							
PYHBG_ECOLI	PROBABLE ABC TRANSPORTER	ESCHERICHIA COLI	176-203								
PYHBG_PSEPU	PROBABLE ABC TRANSPORTER	PSEUDOMONAS PUTIDA	74-101	106-133	147-174						
PYHBG_THIFE	PROBABLE ABC TRANSPORTER	THIOBACILLUS FERROOXIDANS	113-140								
PYHDF_ECOLI	HYPOTHETICAL 55.4 KD PROTEIN	ESCHERICHIA COLI	267-297								
PYHEM_BACSU	HYPOTHETICAL 32.0 KD PROTEIN	BACILLUS SUBTILIS	222-253								
PYHET_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	72-99								
PYHHA_ECOLI	HYPOTHETICAL 16.6 KD PROTEIN	ESCHERICHIA COLI	56-84								
PYHHG_ECOLI	HYPOTHETICAL 15.1 KD PROTEIN	ESCHERICHIA COLI	43-77								
PYHHH_ECOLI	HYPOTHETICAL 14.5 KD PROTEIN	ESCHERICHIA COLI	43-73								
PYHI1_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	167-194								
PYHI3_LACLA	HYPOTHETICAL 38.0 KD PROTEIN	LACTOCOCCUS LACTIS	90-124	132-159							
PYHI6_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	92-148								
PYHI8_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	77-104	156-183							
PYHIJ0_STAAU	HYPOTHETICAL PROTEIN	STAPHYLOCOCCUS AUREUS	18-67								
PYHLN_VIBCH	HYPOTHETICAL 18.3 KD PROTEIN	VIBRIO CHOLERAE	99-126								
PYHMF_METFE	HYPOTHETICAL 32.2 KD PROTEIN	METHANOTHERMUS FERVIDUS	106-133								
PYHS1_CLOAB	HYPOTHETICAL 11.0 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	41-85								
PYHSA_CLOAB	HYPOTHETICAL 20.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	98-125								
PYHSC_CLOAB	HYPOTHETICAL 42.4 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	25-52	208-253	274-310						
PYHVI_LACHE	HYPOTHETICAL PROTEIN	LACTOBACILLUS HELVETICUS	93-120	127-154							
PYHYA_PSESN	HYPOTHETICAL PROTEIN	PSEUDOMONAS SP	217-266								
PYI11_HALHA	HYPOTHETICAL 38.0 KD PROTEIN	HALOBACTERIUM HALOBIUM	245-272								
PYI32_MYCTU	IS986 HYPOTHETICAL 6.6 KD PROTEIN	MYCOBACTERIUM TUBERCULOSIS	19-46								
PYI42_PSEAY	HYPOTHETICAL 42.6 KD PROTEIN	PSEUDOMONAS AMYLODERAMOSA	9-36								
PYI48_METSM	ISM1 HYPOTHETICAL 48.3 KD PROTEIN	METHANOBREVIBACTER SMITHII	73-100	154-184	338-365						
PYI52_HALHA	HYPOTHETICAL 31 KD PROTEIN	HALOBACTERIUM HALOBIUM	86-113								
PYIBB_ECOLI	HYPOTHETICAL 34.0 KD PROTEIN	ESCHERICHIA COLI	202-239								
PYIBD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	9-43								
PYIBF_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	131-158								

BAD ORIGINAL

PCGENE	10?:11?Bt4	Prokaryotic Sequences								
IDLE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PYIBG_ECOLI	HYPOTHETICAL 11.1 KD PROTEIN	ESCHERICHIA COLI	70-97							
PYICC_ECOLI	HYPOTHETICAL 33.2 KD PROTEIN	ESCHERICHIA COLI	143-170							
PYICD_ECOLI	HYPOTHETICAL 31.1 KD PROTEIN	ESCHERICHIA COLI	133-159							
PYICH_ECOLI	HYPOTHETICAL 63.3 KD PROTEIN	ESCHERICHIA COLI	408-433							
PYICI_ECOLI	HYPOTHETICAL 88.1 KD PROTEIN	ESCHERICHIA COLI	122-149							
PYICN_ECOLI	HYPOTHETICAL 11.2 KD PROTEIN	ESCHERICHIA COLI	76-103							
PYICO_ECOLI	HYPOTHETICAL 49.9 KD PROTEIN	ESCHERICHIA COLI	320-347							
PYID8_ECOLI	HYPOTHETICAL 13.8 KD PROTEIN	ESCHERICHIA COLI	34-78							
PYIDE_ECOLI	HYPOTHETICAL 38.9 KD PROTEIN	ESCHERICHIA COLI	86-113	182-209	277-304					
PYIDI_ECOLI	HYPOTHETICAL 13.7 KD PROTEIN	ESCHERICHIA COLI	56-83							
PYIDK_ECOLI	HYPOTHETICAL 62.1 KD PROTEIN	ESCHERICHIA COLI	2-29							
PYIDP_ECOLI	HYPOTHETICAL 27.3 KD PROTEIN	ESCHERICHIA COLI	61-97							
PYIEA_ECOLI	HYPOTHETICAL 49.2 KD PROTEIN	ESCHERICHIA COLI	221-248							
PYIEC_ECOLI	HYPOTHETICAL 60.6 KD PROTEIN	ESCHERICHIA COLI	270-298	270-297						
PYIEC_ERWCH	HYPOTHETICAL PROTEIN	ERWINIA CHRYSANTHEMI	222-67							
PYIED_ECOLI	HYPOTHETICAL 34.8 KD PROTEIN	ESCHERICHIA COLI	86-120							
PYIEG_ECOLI	HYPOTHETICAL 46.9 KD PROTEIN	ESCHERICHIA COLI	293-327							
PYIEH_ECOLI	HYPOTHETICAL 24.7 KD PROTEIN	ESCHERICHIA COLI	51-78							
PYIEM_ECOLI	HYPOTHETICAL 13.0 KD PROTEIN	ESCHERICHIA COLI	73-105							
PYIEO_ECOLI	HYPOTHETICAL 31.3 KD PROTEIN	ESCHERICHIA COLI	201-242	380-407						
PYIFC_ECOLI	HYPOTHETICAL 39.6 KD PROTEIN	ESCHERICHIA COLI	173-202							
PYIGI_ECOLI	HYPOTHETICAL 14.0 KD PROTEIN	ESCHERICHIA COLI	51-92							
PYIGM_ECOLI	HYPOTHETICAL 33.7 KD PROTEIN	ESCHERICHIA COLI	120-154							
PYIGN_ECOLI	HYPOTHETICAL 54.7 KD PROTEIN	ESCHERICHIA COLI	207-234							
PYIGO_ECOLI	HYPOTHETICAL 28.1 KD PROTEIN	ESCHERICHIA COLI	67-94							
PYIGP_ECOLI	HYPOTHETICAL 22.3 KD PROTEIN	ESCHERICHIA COLI	173-200							
PYIGT_ECOLI	HYPOTHETICAL 27.8 KD PROTEIN	ESCHERICHIA COLI	132-159							
PYIHB_ECOLI	HYPOTHETICAL 21.2 KD PROTEIN	ESCHERICHIA COLI	13-40							
PYIHD_ECOLI	HYPOTHETICAL 10.3 KD PROTEIN	ESCHERICHIA COLI	28-55							
PYIHF_ECOLI	HYPOTHETICAL 54.1 KD PROTEIN	ESCHERICHIA COLI	272-306							
PYIHI_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	112-139							
PYIHK_ECOLI	HYPOTHETICAL 65.4 KD PROTEIN	ESCHERICHIA COLI	4-31							
PYIHM_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	83-110	126-154	297-324					
PYIHO_ECOLI	HYPOTHETICAL 81.8 KD PROTEIN	ESCHERICHIA COLI	612-646							
PYIHP_ECOLI	HYPOTHETICAL 53.1 KD PROTEIN	ESCHERICHIA COLI	357-384							
PYIHV_ECOLI	HYPOTHETICAL 31.9 KD PROTEIN	ESCHERICHIA COLI	72-99							
PYIHX_ECOLI	HYPOTHETICAL 33.5 KD PROTEIN	ESCHERICHIA COLI	9-36							
PYIHZ_ECOLI	HYPOTHETICAL 15.9 KD PROTEIN	ESCHERICHIA COLI	6-33							
PYIIP_ECOLI	HYPOTHETICAL 32.9 KD PROTEIN	ESCHERICHIA COLI	23-63							
PYIIU_ECOLI	HYPOTHETICAL 9.6 KD PROTEIN	ESCHERICHIA COLI	28-71							
PYIJC_ECOLI	HYPOTHETICAL 26.6 KD PROTEIN	ESCHERICHIA COLI	136-163							
PYIJH_ECOLI	HYPOTHETICAL 78.3 KD PROTEIN	ESCHERICHIA COLI	225-263							
PYIJK_ECOLI	HYPOTHETICAL 11.2 KD PROTEIN	ESCHERICHIA COLI	26-53							
PYIJO_ECOLI	HYPOTHETICAL 32.1 KD PROTEIN	ESCHERICHIA COLI	214-241							
PYIJP_ECOLI	HYPOTHETICAL 66.6 KD PROTEIN	ESCHERICHIA COLI	110-137	419-446						
PYINL_LISMO	HYPOTHETICAL 26.8 KD PROTEIN	LISTERIA MONOCYTOGENES	7-34							
PYIS1_SHISO	INSERTION ELEMENT IS600	SHIGELLA SONNEI	62-89							
PYIS1_STRCO	IS110 HYPOTHETICAL 40.6 KD PROTEIN	STREPTOMYCES COELICOLOR	123-152							
PYIS3_SHISO	INSERTION ELEMENT IS629	SHIGELLA SONNEI	66-100							
PYISP_BACSP	HYPOTHETICAL 42.1 KD PROTEIN	BACILLUS SP	312-339							
PYIAQ_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	51-78							
PYIAJ_ECOLI	HYPOTHETICAL 20.4 KD PROTEIN	ESCHERICHIA COLI	88-122							
PYIBH_ECOLI	HYPOTHETICAL 78.5 KD PROTEIN	ESCHERICHIA COLI	93-120							
PYIBL_ECOLI	HYPOTHETICAL 9.7 KD PROTEIN	ESCHERICHIA COLI	30-57							
PYIBM_ECOLI	HYPOTHETICAL 26.3 KD PROTEIN	ESCHERICHIA COLI	112-149							
PYIBQ_ECOLI	HYPOTHETICAL 13.7 KD PROTEIN	ESCHERICHIA COLI	2-29							
PYICC_ECOLI	HYPOTHETICAL 60.8 KD PROTEIN	ESCHERICHIA COLI	38-65	414-441	431-492					

BAD ORIGINAL

PGCTAE	10/11/94	Prokaryotic Sequences										
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PYCE_ECOLI	HYPOTHETICAL 60.3 KD PROTEIN	ESCHERICHIA COLI	434-481									
PYCO_ECOLI	HYPOTHETICAL 39.2 KD PROTEIN	ESCHERICHIA COLI	394-421									
PYCO_ECOLI	HYPOTHETICAL 33.1 KD PROTEIN	ESCHERICHIA COLI	91-118									
PYCP_ECOLI	HYPOTHETICAL 53.4 KD PROTEIN	ESCHERICHIA COLI	342-389									
PYCS_ECOLI	HYPOTHETICAL 73.7 KD PROTEIN	ESCHERICHIA COLI	366-396									
PYCW_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	50-84									
PYDA_ECOLI	HYPOTHETICAL 84.3 KD PROTEIN	ESCHERICHIA COLI	2-29	451-483								
PYDB_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	103-134									
PYDA_ECOLI	HYPOTHETICAL 17.5 KD PROTEIN PRECURSOR	ESCHERICHIA COLI	35-69	88-129								
PYKA5_BACFI	HYPOTHETICAL 48.8 KD PROTEIN	BACILLUS FIRMUS	321-353									
PYLA1_LACAC	HYPOTHETICAL PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74									
PYLA2_LACAC	HYPOTHETICAL 14.5 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	15-42									
PYLAJ_LACAC	HYPOTHETICAL 14.4 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74									
PYLAC_SULSO	HYPOTHETICAL 24.4 KD PROTEIN	SULFOLOBUS SOLFATARICUS	23-50									
PYLPJ_PSEPU	HYPOTHETICAL 44.7 KD PROTEIN	PSEUDOMONAS PUTIDA	186-219	314-341								
PYLPA_YEREN	YLPA LIPOPROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	184-211									
PYLTJ_ANAVA	HYPOTHETICAL 22.6 KD PROTEIN	ANABAENA VARIABILIS	172-199									
PYLUD_LACLA	HYPOTHETICAL 29.7 KD PROTEIN	LACTOCOCCUS LACTIS	33-70									
PYME2_BACSU	HYPOTHETICAL 33.3 KD PROTEIN	BACILLUS SUBTILIS	52-79									
PYMG1_MYCGE	HYPOTHETICAL 114.4 KD PROTEIN PRECURSOR	MYCOPLASMA GENITALIUM	56-83	159-193	420-445	981-1008						
PYNGA_CLOPE	HYPOTHETICAL PROTEIN	CLOSTRIDIUM PERFRINGENS	139-166									
PYNGB_CLOPE	HYPOTHETICAL 31.2 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	12-49	63-97	182-211							
PYNI_METTL	HYPOTHETICAL PROTEIN	METHANOCOCCUS THERMOLITHOTROPHICUS	55-89									
PYNQI_PAUDE	HYPOTHETICAL 9.3 KD PROTEIN	PARACOCCUS DENITRIFICANS	52-86									
PYNTJ_ANASP	HYPOTHETICAL 28.1 KD PROTEIN	ANABAENA SP	171-198									
PYNTJ_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	87-165									
PYOHD_ECOLI	HYPOTHETICAL 21.4 KD PROTEIN	ESCHERICHIA COLI	5-32									
PYOHG_ECOLI	HYPOTHETICAL 41.3 KD PROTEIN	ESCHERICHIA COLI	104-171	289-316								
PYOJA_ECOLI	HYPOTHETICAL 13.0 KD PROTEIN	ESCHERICHIA COLI	17-44									
PYOJE_ECOLI	HYPOTHETICAL 91.5 KD PROTEIN	ESCHERICHIA COLI	221-248									
PYOJF_ECOLI	HYPOTHETICAL 9.5 KD PROTEIN	ESCHERICHIA COLI	41-62									
PYOJH_ECOLI	HYPOTHETICAL 54.3 KD PROTEIN	ESCHERICHIA COLI	145-193									
PYOJJ_ECOLI	HYPOTHETICAL 36.3 KD PROTEIN	ESCHERICHIA COLI	94-121									
PYOM4_PHOSS	HYPOTHETICAL PROTEIN IN OMPH 3'REGION	PHOTOBACTERIUM SP	32-59									
PYOPH_YEREN	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA ENTEROCOLITICA	63-105									
PYOPH_YERPS	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA PSEUDOTUBERCULOSIS	63-105									
PYOPN_YEREN	OUTER MEMBRANE PROTEIN YOPN	YERSINIA ENTEROCOLITICA	23-50	66-93	235-262							
PYOPN_YERPS	OUTER MEMBRANE PROTEIN YOPN	YERSINIA PSEUDOTUBERCULOSIS	23-50	66-93	235-262							
PYOPQ_YEREN	YOPQ PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	61-88									
PYORA_HAEIN	HYPOTHETICAL 31.5 KD PROTEIN	HAEMOPHILUS INFLUENZAE	147-174									
PYORA_LISMO	HYPOTHETICAL 23.6 KD PROTEIN	LISTERIA MONOCYTOGENES	32-77									
PYORA_PYRWO	HYPOTHETICAL 24.7 KD PROTEIN	PYROCOCCUS WOESEI	183-210									
PYORB_HAEIN	HYPOTHETICAL 19.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	39-66									
PYORC_HAEIN	HYPOTHETICAL 19.9 KD PROTEIN	HAEMOPHILUS INFLUENZAE	49-79									
PYORE_HAEIN	8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	47-74	82-109								
PYORF_HAEIN	26.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	199-229									
PYORH_HAEIN	HYPOTHETICAL 13.7 KD PROTEIN	HAEMOPHILUS INFLUENZAE	7-34									
PYORI_HAEIN	93.4 KD PROTEIN	HAEMOPHILUS INFLUENZAE	416-450	688-722								
PYORQ_BACSU	HYPOTHETICAL 34 KD PROTEIN	BACILLUS SUBTILIS	148-175									
PYORX_PYRWO	HYPOTHETICAL PROTEIN	PYROCOCCUS WOESEI	66-93									
PYORZ_LISMO	HYPOTHETICAL 16.9 KD PROTEIN	LISTERIA MONOCYTOGENES	27-54									
PYP15_STAAU	HYPOTHETICAL 13.5 KD PROTEIN	STAPHYLOCOCCUS AUREUS	71-98	110-137								
PYP2J_BACSU	HYPOTHETICAL 22.5 KD PROTEIN	BACILLUS SUBTILIS	57-84									
PYP2J_STAAU	HYPOTHETICAL 22.2 KD PROTEIN	STAPHYLOCOCCUS AUREUS	29-70									
PYP2A_STAAU	HYPOTHETICAL 26.9 KD PROTEIN	STAPHYLOCOCCUS AUREUS	34-104									
PYP2B_STAAU	HYPOTHETICAL 27.0 KD PROTEIN	STAPHYLOCOCCUS AUREUS	23-60	62-89	179-206							
PYP2C_STAAU	HYPOTHETICAL 27.7 KD PROTEIN	STAPHYLOCOCCUS AUREUS	13-43	129-176								

BAD ORIGINAL

PCGENE	10/17/96	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PYP7_AGAT4	HYPOTHETICAL PROTEIN 7	AGROBACTERIUM TUMEFACIENS	29-56							
PYPA3_LEGPN	HYPOTHETICAL PROTEIN	LEGIONELLA PNEUMOPHILA	94-133							
PYPA5_ENTFA	HYPOTHETICAL 11 KD PROTEIN	ENTEROCOCCUS FAECALIS	79-106							
PYPA_BACAN	HYPOTHETICAL 21.6 KD PROTEIN	BACILLUS ANTHRACIS	113-47	115-162						
PYPC1_ECOLI	HYPOTHETICAL 27.6 KD PROTEIN	ESCHERICHIA COLI	5-32							
PYPDA_BACSU	HYPOTHETICAL 27.3 KD PROTEIN	BACILLUS SUBTILIS	184-222							
PYPF1_ECOLI	HYPOTHETICAL 12.6 KD PROTEIN	ESCHERICHIA COLI	116-43							
PYPH1_SYNP2	HYPOTHETICAL 18.1 KD PROTEIN	SYNECHOCOCCUS SP	34-61							
PYPI6_CLOPE	HYPOTHETICAL 19.7 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	7-34	43-77	83-149					
PYPI9_CLOPE	HYPOTHETICAL 14.5 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	2-59							
PYPIX_CLOPE	HYPOTHETICAL 38.4 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	110-137	263-290	303-340					
PYPIY_PSEAE	HYPOTHETICAL 38.5 KD PROTEIN	PSEUDOMONAS AERUGINOSA	22-52							
PYPP_BACSU	HYPOTHETICAL PROCESSING PROTEASE	BACILLUS SUBTILIS	329-356							
PYPQQ_KLEPN	HYPOTHETICAL PROTEIN	KLEBSIELLA PNEUMONIAE	243-270							
PYPS2_PLEBO	HYPOTHETICAL 13.1 KD PROTEIN	PLECTONEMA BORYANUM	27-54							
PYPV1_METTF	HYPOTHETICAL 40.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335						
PYPV7_METTF	HYPOTHETICAL 22.5 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	3-30							
PYPVB_METTF	HYPOTHETICAL 17.3 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	69-117							
PYPYB_BACSU	HYPOTHETICAL 49.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	333-360	389-430						
PYPZ1_METTF	HYPOTHETICAL 72.4 KD PROTEIN	BACILLUS SUBTILIS	602-636							
PYPZ2_METTF	HYPOTHETICAL 40.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335						
PYPZ3_METTF	HYPOTHETICAL 33.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	38-65	154-188						
PYPZ7_METTF	HYPOTHETICAL 34.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	193-220	228-253	381-408					
PYPZ9_METTF	HYPOTHETICAL 9.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	5-78							
PYR18_THEPE	HYPOTHETICAL 18.7 KD PROTEIN	THERMOFILUM PENDENS	82-109							
PYRB1_HALCU	HYPOTHETICAL 40 KD GTP-BINDING PROTEIN	HALOBACTERIUM CUTIRUBRUM	26-51							
PYREC_SYNP2	HYPOTHETICAL 28.7 KD PROTEIN	SYNECHOCOCCUS SP	49-76							
PYRF0_SALTY	HYPOTHETICAL 40.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	143-190							
PYRF1_SALTY	HYPOTHETICAL 31.0 KD PROTEIN	SALMONELLA TYPHIMURIUM	428-455							
PYRF5_SALTY	HYPOTHETICAL 20.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	29-56							
PYRF6_SALTY	HYPOTHETICAL 36.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	130-157							
PYRG3_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	140-167							
PYRLI_METVA	HYPOTHETICAL PROTEIN	METHANOCOCCUS VANNIELII	40-93	129-156						
PYRP1_METVA	HYPOTHETICAL 11.6 KD PROTEIN	METHANOCOCCUS VANNIELII	13-40							
PYRP2_SULAC	HYPOTHETICAL 11.3 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	5-51							
PYRP3_SULAC	HYPOTHETICAL 14.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	37-71							
PYRTF_BACSU	HYPOTHETICAL 23.3 KD PROTEIN	BACILLUS SUBTILIS	29-56							
PYRT3_BACSU	HYPOTHETICAL 11.4 KD PROTEIN	BACILLUS SUBTILIS	3-30	44-81						
PYSCB_YEREN	HYPOTHETICAL YSC OPERON PROTEIN B	YERSINIA ENTEROCOLITICA	90-121							
PYSCC_YEREN	YSC OPERON PROTEIN C PRECURSOR	YERSINIA ENTEROCOLITICA	38-72	365-399						
PYSCD_YEREN	YSC OPERON PROTEIN D	YERSINIA ENTEROCOLITICA	242-269							
PYSCH_YEREN	YSC OPERON PROTEIN H	YERSINIA ENTEROCOLITICA	28-58							
PYSCH_YERPS	YSC OPERON PROTEIN H	YERSINIA PSEUDOTUBERCULOSIS	28-58							
PYSCI_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	49-76							
PYSCI_YERPS	YSC OPERON PROTEIN I	YERSINIA PSEUDOTUBERCULOSIS	49-76							
PYSCJ_YEREN	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA ENTEROCOLITICA	99-126							
PYSCJ_YERPS	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	99-126							
PYSCL_YEREN	YSC OPERON PROTEIN L	YERSINIA ENTEROCOLITICA	41-68							
PYSCL_YERPS	YSC OPERON PROTEIN L	YERSINIA PSEUDOTUBERCULOSIS	41-68							
PYSMA_SERMA	HYPOTHETICAL 9.5 KD PROTEIN	SERRATIA MARCESCENS	111-70							
PYSOJ_DESVM	HYPOTHETICAL 28.3 KD PROTEIN	DESULFUROLOBUS AMBIVALENS	68-109							
PYSOJ_DESAM	HYPOTHETICAL PROTEIN	DESULFUROLOBUS AMBIVALENS	65-155							
PYSP2_LEPI	HYPOTHETICAL PROTEIN	LEPTOSPIRA INTERROGANS	6-33	66-94						
PYSR1_MYCMY	HYPOTHETICAL PROTEIN	MYCOPLASMA MYCOIDES	55-99	185-227	300-327					
PYSYJ_BACSU	HYPOTHETICAL 19.6 KD PROTEIN	BACILLUS SUBTILIS	72-99							
PYSYN_METFE	HYPOTHETICAL PROTEIN	METHANOTHERMUS FERVIDUS	78-105							
PYT17_STRFR	HYPOTHETICAL 37.1 KD PROTEIN	STREPTOMYCES FRADIAE	246-273							

BAD ORIGINAL

PCGENE	107a178a4	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PYT0X_BACSU	HYPOTHETICAL 35.6 KD PROTEIN	BACILLUS SUBTILIS	244-321	279-306							
PYTX8_LEPBI	HYPOTHETICAL 22 KD PROTEIN	LEPTOSPIRA BIFLEXA	84-113								
PYTNP_LACLA	HYPOTHETICAL 13.3 KD PROTEIN	LACTOCOCCUS LACTIS	76-112								
PYT5I_BACSU	HYPOTHETICAL 20 KD PROTEIN	BACILLUS SUBTILIS	37-64								
PYT5F_SPICI	HYPOTHETICAL 23.8 KD PROTEIN	SPIROPLASMA CITRI	102-149								
PYX04_BACSU	HYPOTHETICAL 12.8 KD PROTEIN	BACILLUS SUBTILIS	37-64	68-95							
PYX06_BACSU	HYPOTHETICAL 21.0 KD PROTEIN	BACILLUS SUBTILIS	142-169								
PYX13_BACSU	HYPOTHETICAL 26.0 KD PROTEIN	BACILLUS SUBTILIS	17-51								
PYX15_BACSU	HYPOTHETICAL 61.1 KD PROTEIN	BACILLUS SUBTILIS	165-207	262-289							
PYX18_BACSU	HYPOTHETICAL 66.1 KD PROTEIN	BACILLUS SUBTILIS	3-30	34-61	94-142						
PYX19_BACSU	HYPOTHETICAL 31.1 KD PROTEIN	BACILLUS SUBTILIS	36-83	85-112							
PYX20_BACSU	HYPOTHETICAL 23.3 KD PROTEIN	BACILLUS SUBTILIS	24-58								
PYX12_ANASP	HYPOTHETICAL 18.9 KD PROTEIN	ANABAENA SP	77-104								
PYXY8_CALSA	HYPOTHETICAL 10.7 KD PROTEIN	CALDOCELLUM SACCHAROLYTICUM	9-39								
PYXYC_CALSA	HYPOTHETICAL PROTEIN	CALDOCELLUM SACCHAROLYTICUM	41-94								
PYZE1_ECOLI	HYPOTHETICAL 16.7 KD PROTEIN	ESCHERICHIA COLI	41-78								

TABLE IX

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL HUMAN PROTEINS

PCGENE	1973.17.4 Motif Search on All Human Protein Sequences									
FILE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
P140F_HUMAN	14-3-3 PROTEIN ETA (PROTEIN AS1) (FRAGMENT).	101-135								
P143S_HUMAN	14-3-3 PROTEIN HOMOLOG STRATIFIN.	45-72								
P143T_HUMAN	14-3-3 PROTEIN THETA (14-3-3 PROTEIN T-CELL) (HS1 PROTEIN).	61-92								
P143Z_HUMAN	14-3-3 PROTEIN ZETA (PROTEIN KINASE C INHIBITOR PROTEIN-1) (KCIP-1).	28-55								
P1A33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-33 (A*19) A*3901 ALPHA CHAIN	87-114								
P1A34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-34 (A*19) A*3902 ALPHA CHAIN	87-114								
P1B02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-7 B*0702 ALPHA CHAIN	87-114								
P1B05_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-13 B*1301 ALPHA CHAIN	87-114	148-182							
P1B10_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-35 (B-15) B*1502 ALPHA CHAIN	84-115								
P1B11_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-72 (BW-70) B*1503 ALPHA	84-115								
P1B12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-62 B*1504 ALPHA CHAIN	76-107								
P1B17_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-18 B*1801 ALPHA CHAIN	84-115								
P1B21_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3501 ALPHA CHAIN	84-115								
P1B22_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3502 ALPHA CHAIN	84-115								
P1B23_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3503 ALPHA CHAIN	84-115								
P1B24_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3504 ALPHA CHAIN	76-107								
P1B25_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3505 ALPHA CHAIN	84-115								
P1B26_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3506 ALPHA CHAIN	84-115								
P1B27_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3507 ALPHA CHAIN	84-115								
P1B28_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3508 ALPHA CHAIN	84-115								
P1B29_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-37 B*3701 ALPHA CHAIN	88-115								
P1B32_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-39 B*3902 ALPHA CHAIN	87-114								
P1B33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-60 (B-40) B*4001 ALPHA CHAIN	60-91								
P1B34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4002 ALPHA CHAIN	84-115								
P1B35_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4003 ALPHA CHAIN	84-115								
P1B36_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4004 ALPHA CHAIN	84-115								
P1B38_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-41 B*4101 ALPHA CHAIN	84-115								
P1B39_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-42 B*4201 ALPHA CHAIN	87-114								
P1B40_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44 (B-12) B*4401 ALPHA CHAIN	84-111								
P1B41_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44 (B-12) B*4402 ALPHA CHAIN	87-114								
P1B42_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44 (B-12) B*4403 ALPHA CHAIN	87-114								
P1B43_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-45 (B-12) B*4501 ALPHA CHAIN	84-115								
P1B44_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-46 B*4601 ALPHA CHAIN	87-114								
P1B45_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-47 B*4701 ALPHA CHAIN	88-115								
P1B46_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-48 B*4801 ALPHA CHAIN	84-115								
P1B47_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-49 (B-21) B*4901 ALPHA CHAIN	87-114								
P1B48_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-50 (B-21) B*5001 ALPHA CHAIN	84-115								
P1B53_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-52 (B-5) B*5201 ALPHA CHAIN	87-114								
P1B54_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-54 (BW-22) B*5401 ALPHA	87-114								
P1B56_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-53 (BW-22) B*5301 ALPHA	87-114								
P1B57_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55 (BW-22) B*5502 ALPHA	87-114								
P1B58_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56 (BW-22) B*5601 ALPHA	87-114								
P1B59_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56 (BW-22) B*5602 ALPHA	87-114								
P1C01_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0101 ALPHA CHAIN	87-114								
P1C02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0102 ALPHA CHAIN	87-114								
P1C03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0201 ALPHA CHAIN	87-114								
P1C04_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0202 ALPHA CHAIN	87-114								
P1C05_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-3 CW*0102 ALPHA CHAIN	87-114								
P1C12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0801 ALPHA CHAIN	87-114								
P1C13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0802 ALPHA CHAIN	87-114								
P1C14_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0803 ALPHA CHAIN	87-114								
P1C17_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW*1401 ALPHA CHAIN PRECURSOR	87-114								
P2A6_HUMAN	69/71 KD (2'-5')OLIGOADENYLATE SYNTHETASE	591-620								
P2AA_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, ALPHA ISOFORM	12-49	54-81							
P2AB_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, BETA ISOFORM	9-36	41-68	79-106						
P2BA_HUMAN	PROTEIN PHOSPHATASE PP2A, 55 KD REGULATORY SUBUNIT, ALPHA ISOFORM	177-218								
P411_HUMAN	ERYTHROID PROTEIN 4.1 (BAND 4.1, ERYTHROCYTE FORM)	12-46								

BAD ORIGINAL

PCGENE	167s178s4 Motif Search on All Human Protein Sequences										
FILE_NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
P413_HUMAN	NON-ERYTHROID PROTEIN 4.1 (BAND 4.1, LYMPHOID FORM).	3-30	708-735								
P42_HUMAN	ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2.	173-200	518-545								
P4F2_HUMAN	4F2 CELL-SURFACE ANTIGEN HEAVY CHAIN (4F2HC) (LYMPHOCYTE ACTIVATION	281-322									
P5HIE_HUMAN	5-HYDROXYTRYPTAMINE 1E RECEPTOR (5-HT-1E) (SEROTONIN RECEPTOR).	311-338									
P5HIF_HUMAN	5-HYDROXYTRYPTAMINE 1F RECEPTOR (5-HT-1F) (SEROTONIN RECEPTOR).	222-253									
P5HIA_HUMAN	5-HYDROXYTRYPTAMINE 2A RECEPTOR (5-HT-2A) (SEROTONIN RECEPTOR).	22-56									
P5HT_HUMAN	5-HYDROXYTRYPTAMINE 7 RECEPTOR (5-HT-7) (5-HT-X) (SEROTONIN RECEPTOR)	72-99									
PA1AC_HUMAN	ALPHA-1-ANTICHYMOTRYPSIN PRECURSOR (ACT).	98-132	330-359								
PA1AG_HUMAN	ALPHA-1-ACID GLYCOPROTEIN 1 PRECURSOR (OROSOMUCOID) (OAID).	92-119									
PA1AT_HUMAN	ALPHA-1-ANTITRYPSIN PRECURSOR (ALPHA-1 PROTEASE INHIBITOR) (ALPHA-1-	168-202									
PA1AU_HUMAN	ALPHA-1-ANTITRYPSIN-RELATED PROTEIN PRECURSOR.	163-197									
PA2AP_HUMAN	ALPHA-2-ANTIPLASMIN PRECURSOR (ALPHA-2-PLASMIN INHIBITOR) (ALPHA-2-	191-218	365-395								
PA2GL_HUMAN	LEUCINE-RICH ALPHA-2-GLYCOPROTEIN (LRG).	104-134									
PA2MG_HUMAN	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M).	53-80	319-349	1085-1112	1402-1429						
PA4_HUMAN	ALZHEIMER'S DISEASE AMYLOID A4 PROTEIN PRECURSOR (PROTEASE NEXIN-II)	428-455									
PACT_HUMAN	ALPHA-ACTININ (F-ACTIN CROSS LINKING PROTEIN).	92-119	720-747								
PAATM_HUMAN	ASPARTATE AMINOTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.6.1.1).	109-136									
PABP2_HUMAN	ENDOTHELIAL ACTIN-BINDING PROTEIN (ABP-280) (NONMUSCLE FILAMIN)	61-88	1119-1147	2604-2633							
PAC12_HUMAN	ACTIVATOR 1 37 KD SUBUNIT (REPLICATION FACTOR C 37 KD SUBUNIT) (A1	306-333									
PAC15_HUMAN	ACTIVATOR 1 140 KD SUBUNIT (REPLICATION FACTOR C LARGE SUBUNIT) (A1	14-51	182-209	668-700							
PACOL_HUMAN	ACYL-COA DEHYDROGENASE PRECURSOR, LONG-CHAIN SPECIFIC (EC 1.3.99.13).	78-108	179-206	313-340							
PACT_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, TESTIS-SPECIFIC (EC 3.4.15.1)	78-115	126-153	676-710							
PACE_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, SOMATIC (EC 3.4.15.1) (ACE)	632-689	700-727	1250-1284							
PACHA_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, ALPHA CHAIN PRECURSOR.	48-80									
PACHE_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, EPSILON CHAIN PRECURSOR.	46-98									
PACHG_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, GAMMA CHAIN PRECURSOR.	45-79	304-331								
PACHP_HUMAN	NEURONAL ACETYLCHOLINE RECEPTOR PROTEIN, BETA-4 CHAIN (FRAGMENT)	29-56	70-97								
PACRO_HUMAN	ACROSIN PRECURSOR (EC 3.4.21.10).	122-149									
PACYM_HUMA	ACYLPHOSPHATASE, MUSCLE TYPE ISOZYME (EC 3.6.1.7) (ACYLPHOSPHATE	26-53									
PAD12_HUMAN	ADP,ATP CARRIER PROTEIN, FIBROBLAST ISOFORM (ADP/ATP TRANSLOCASE 2)	162-189									
PAD13_HUMAN	ADP,ATP CARRIER PROTEIN, LIVER ISOFORM T3 (ADP/ATP TRANSLOCASE 3)	163-190									
PAK79_HUMAN	A-KINASE ANCHOR PROTEIN 79 (AKAP 79) (CAMP-DEPENDENT PROTEIN KINASE	197-238	381-414								
PALFA_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1.2.13) A (MUSCLE).	36-63									
PALFB_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1.2.13) B (LIVER).	79-113									
PAMD1_HUMAN	AMP DEAMINASE 1 (EC 3.5.4.6) (MYOADENYLATE DEAMINASE) (AMP DEAMINASE	59-86									
PAMD3_HUMAN	AMP DEAMINASE 3 (EC 3.5.4.6) (AMP DEAMINASE ISOFORM E).	49-76									
PAMPN_HUMAN	AMINOPEPTIDASE N (EC 3.4.11.2) (MICROSOMAL AMINOPEPTIDASE) (GP150)	492-523	604-648	926-964							
PANDR_HUMAN	AMPHIREGULIN PRECURSOR (AR).	213-247									
PANP2_HUMAN	ALPHA-2-MACROGLOBULIN RECEPTOR-ASSOCIATED PROTEIN PRECURSOR	173-216	263-290								
PANPB_HUMAN	BRAIN NATRIURETIC PEPTIDE PRECURSOR.	36-63									
PANR1_HUMAN	ANKYRIN R (ANKYRINS 2.1 AND 2.2) (ERYTHROCYTE ANKYRIN).	812-839	1004-1031	1617-1644							
PANR3_HUMAN	ANKYRIN, BRAIN VARIANT 1 (ANKYRIN B) (ANKYRIN, NONERYTHROID)	1544-1571									
PANR4_HUMAN	ANKYRIN, BRAIN VARIANT 2 (ANKYRIN B) (ANKYRIN, NONERYTHROID)	1811-1838									
PANPA_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR A PRECURSOR (ANP-A) (ANPRA) (GC-A)	553-580	823-852								
PANPB_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR B PRECURSOR (ANP-B) (ANPRB) (GC-B)	810-837									
PANT2_HUMAN	ANTITHROMBIN-III PRECURSOR (ATIII).	162-196									
PANX2_HUMAN	ANNEXIN II (LIPOCORTIN II) (CALPACTIN I HEAVY CHAIN) (CHROMOBINDIN 8)	40-67	306-333								
PANX3_HUMAN	ANNEXIN III (LIPOCORTIN III) (PLACENTAL ANTICOAGULANT PROTEIN III)	215-242									
PANX6_HUMAN	ANNEXIN VI (LIPOCORTIN VI) (P68) (P70) (PROTEIN III) (CHROMOBINDIN 20)	60-87	626-653								
PANX8_HUMAN	ANNEXIN, INTESTINE-SPECIFIC (ISA).	37-78	137-164								
PAOFA_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) A (EC 1.4.3.4) (MONOAMINE OXIDASE)	16-43	74-104								
PAOFB_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) B (EC 1.4.3.4) (MONOAMINE OXIDASE)	68-95									
PAPA1_HUMAN	APOLIPOPROTEIN A-I PRECURSOR (APO-AI).	57-84									
PAPB_HUMAN	APOLIPOPROTEIN B-100 PRECURSOR (APO B-100/APO B-48).	585-619	1073-1100	1353-1380	1524-1584	2074-2113	2132-2159	2181-2215	2240-2271	2360-2389	
		2466-2507	2529-2559	2850-2900	3360-3390	3480-3570	3620-3654	4040-4074	4090-4120	4135-4167	
		4274-4301	4397-4438	4465-4492	4499-4544						

BAD ORIGINAL

PCGENE	[07:17:Tue Motif Search on All Human Protein Sequences]									
FILE_NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PAPC_HUMAN	APOLIPOPROTEIN C-II PRECURSOR (APO-CII).	36-63								
PAPC_HUMAN	ADENOMATOUS POLYPOSIS COLI PROTEIN (APC PROTEIN).	145-172	617-651	834-861	1795-1822	2172-2212	2572-2609			
PAPE_HUMAN	APOLIPOPROTEIN E PRECURSOR (APO-E).	48-81	247-274							
PAPOA_HUMAN	APOLIPOPROTEIN(A) PRECURSOR (EC 3.4.21.-) (APO(A)) (LP(A)).	4448-4475								
PAQP1_HUMAN	AQUAPORIN-CHIP (WATER CHANNEL PROTEIN FOR RED BLOOD CELLS AND KIDNEY)	39-73								
PARK1_HUMAN	BETA-ADRENERGIC RECEPTOR KINASE 1 (EC 2.7.1.126) (BETA-ARK-1).	523-553								
PARLY_HUMAN	ARGININOSUCCINATE LYASE (EC 4.3.2.1) (ARGINOSUCCINASE).	69-101								
PARNT_HUMAN	ARYL HYDROCARBON RECEPTOR NUCLEAR TRANSLOCATOR (ARNT PROTEIN) (DIO	223-250								
PARRC_HUMAN	BETA-ARRESTIN 2.	213-242	303-332							
PARRS_HUMAN	ARRESTIN (RETINAL S-ANTIGEN) (48 KD PROTEIN) (S-AG).	299-332								
PARY1_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, MONOMORPHIC (EC 2.3.1.5) (NAT).	7-34								
PARY2_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, POLYMORPHIC (EC 2.3.1.5) (PNAT).	7-34								
PASNS_HUMAN	ASPARAGINE SYNTHETASE (GLUTAMINE-HYDROLYZING) (EC 6.3.5.4) (TS11 CELL	311-338	347-374							
PATCD_HUMAN	CALCIUM-TRANSPORTING ATPASE SARCOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190								
PATCE_HUMAN	CALCIUM-TRANSPORTING ATPASE ENDOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190								
PATF1_HUMAN	TRANSCRIPTION FACTOR ATF-1 (FRAGMENT).	201-230								
PATF3_HUMAN	TRANSCRIPTION FACTOR ATF-3 (FRAGMENT).	155-183								
PATF5_HUMAN	TRANSCRIPTION FACTOR ATF-5 (FRAGMENT).	30-61								
PATF6_HUMAN	TRANSCRIPTION FACTOR ATF-6 (FRAGMENT).	34-68								
PATFA_HUMAN	TRANSCRIPTION FACTOR ATF-A AND ATF-A-DELTA.	331-394								
PATPE_HUMAN	ATP SYNTHASE B CHAIN, MITOCHONDRIAL PRECURSOR (EC 3.6.1.34).	129-163								
PB232_HUMAN	NUCLEOLAR PHOSPHOPROTEIN B23 (NUCLEOPHOSMIN) (NUMATRIN).	114-141								
PB2AR_HUMAN	BETA-2-ADRENERGIC RECEPTOR.	292-319	345-372							
PB3A3_HUMAN	ANION EXCHANGE PROTEIN 3 (NON-ERYTHROID BAND 3-LIKE PROTEIN) (BND3L).	1081-1111								
PB94_HUMAN	B94 PROTEIN.	115-142	525-562	609-636						
PBAN7_HUMAN	ERYTHROCYTE BAND 7 INTEGRAL MEMBRANE PROTEIN.	106-140								
PBASO_HUMAN	BASONUCLIN.	120-147	310-337	773-807						
PBCGB_HUMAN	TRANSFORMING PROTEIN BCL-3-BETA.	178-205								
PBCGF_HUMAN	B-CELL GROWTH FACTOR PRECURSOR (BCGF-13 KD).	33-63								
PBCR_HUMAN	BREAKPOINT CLUSTER REGION PROTEIN.	784-825								
PBGLR_HUMAN	BETA-GLUCURONIDASE PRECURSOR (EC 3.2.1.31).	246-280	504-531							
PBMP1_HUMAN	BONE MORPHOGENETIC PROTEIN 2 PRECURSOR (BMP-2) (BMP-2A)	216-250								
PBMP3_HUMAN	BONE MORPHOGENETIC PROTEIN 3 PRECURSOR (BMP-3).	202-229								
PBMP6_HUMAN	BONE MORPHOGENETIC PROTEIN 6 PRECURSOR (BMP-6).	274-301								
PBMP7_HUMAN	BONE MORPHOGENETIC PROTEIN 7 PRECURSOR (BMP-7) (OSTEOGENIC PROTEIN 1)	192-219								
PBN1_HUMAN	BN1 PROTEIN.	284-311								
PBPI_HUMAN	BACTERICIDAL PERMEABILITY INCREASING PROTEIN PRECURSOR (BPI) (CAP 57).	168-195								
PBRS3_HUMAN	BOMBESIN RECEPTOR SUBTYPE-3 (BRS-3).	10-37								
PBTF2_HUMAN	BASIC TRANSCRIPTION FACTOR 62 KD SUBUNIT (P62).	128-162	333-385							
PBTG1_HUMAN	BTG1 PROTEIN (B-CELL TRANSLOCATION GENE 1 PROTEIN).	26-53								
PC1TC_HUMAN	C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFO	330-363								
PCATA_HUMAN	MHC CLASS II TRANSACTIVATOR CIITA.	921-948								
PCA1B_HUMAN	COLLAGEN ALPHA 1(XII) CHAIN PRECURSOR.	120-150								
PCA1B_HUMAN	COLLAGEN ALPHA 1(XI) CHAIN PRECURSOR.	341-368								
PCABV_HUMAN	CALBINDIN (VITAMIN D-DEPENDENT CALCIUM-BINDING PROTEIN (CABP), AVIAN-	27-54								
PCAD5_HUMAN	CADHERIN 5 PRECURSOR (7B4 ANTIGEN).	723-750								
PCADE_HUMAN	EPITHELIAL-CADHERIN PRECURSOR (E-CADHERIN) (UVOMORULIN) (CAM 120/80)	838-865								
PCADN_HUMAN	NEURAL-CADHERIN PRECURSOR (N-CADHERIN).	93-122	323-350							
PCADP_HUMAN	PLACENTAL-CADHERIN PRECURSOR (P-CADHERIN).	384-411	580-607							
PCAGA_HUMAN	CALGRANULIN A (MIGRATION INHIBITORY FACTOR-RELATED PROTEIN 8) (MRP-8)	2-29								
PCALR_HUMAN	CALCITONIN RECEPTOR PRECURSOR (CT-R).	140-167								
PCAMA_HUMA	CARTILAGE MATRIX PROTEIN PRECURSOR.	297-324	467-494							
PCAP1_HUMAN	CALPAIN 1, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	561-588								
PCAP2_HUMAN	CALPAIN 2, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	237-284	502-529							
PCAP3_HUMAN	CALPAIN P94, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-	674-701								
PCAPL_HUMAN	PLACENTAL CALCIUM-BINDING PROTEIN.	13-40								
PCAY_HUMAN	ADENYLYL CYCLASE-ASSOCIATED PROTEIN (CAP).	111-138	163-197	1221-355						

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PCGENE	107x178x4 Motif Search on All Human Protein Sequences										
FILE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PCART_HUMAN	CALRETININ (29 KD CALBINDIN).	217-244									
PCAS5_HUMAN	BETA CASEIN PRECURSOR.	14-40									
PCATA_HUMAN	CATALASE (EC 1.11.1.6).	422-456									
PCATD_HUMAN	CATHEPSIN D PRECURSOR (EC 3.4.23.5).	253-282									
PCATH_HUMAN	CATHEPSIN H PRECURSOR (EC 3.4.22.16).	41-68									
PCATL_HUMAN	CATHEPSIN L PRECURSOR (EC 3.4.22.15) (MAJOR EXCRETED PROTEIN) (MEP).	278-305									
PCATS_HUMAN	CATHEPSIN S PRECURSOR (EC 3.4.22.27).	30-57	142-169								
PCBFB_HUMAN	CCAAT-BINDING TRANSCRIPTION FACTOR SUBUNIT B (CBF-B) (NF-Y PROTEIN	24-58	138-165								
PCBG_HUMAN	CORTICOSTEROID-BINDING GLOBULIN PRECURSOR (CBG) (TRANSCORTIN).	88-122									
PCBPB_HUMAN	CARBOXYPEPTIDASE B PRECURSOR (EC 3.4.17.2) (PANCREAS-SPECIFIC PROTEIN)	69-129	278-305	319-346							
PCBPH_HUMAN	CARBOXYPEPTIDASE H PRECURSOR (EC 3.4.17.10) (CARBOXYPEPTIDASE E) (CPE)	155-182									
PCC21_HUMAN	CDC21 HOMOLOG (P1-CDC11) (FRAGMENT).	33-62									
PCC27_HUMAN	PROTEIN CDC27HS.	209-240									
PCCGI_HUMAN	TRANSCRIPTION INITIATION FACTOR TFIID 250 KD SUBUNIT (TBP-ASSOCIATED	1298-1342									
PCD14_HUMAN	MONOCYTE DIFFERENTIATION ANTIGEN CD14 PRECURSOR (MYELOID CELL-SPECIF	142-169									
PCD1A_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL.	32-63	281-308								
PCD1E_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1E PRECURSOR (CD1E ANTIGEN) (R3G1)	73-104									
PCD20_HUMAN	B-LYMPHOCYTE ANTIGEN CD20 (B-LYMPHOCYTE SURFACE ANTIGEN B1) (LEU-16)	226-255									
PCD2R_HUMAN	CD2R RECEPTOR PRECURSOR.	226-255									
PCD3_HUMAN	T-CELL SURFACE ANTIGEN CD3 PRECURSOR (T-CELL SURFACE ANTIGEN	88-119									
PCD34_HUMAN	HEMOPOIETIC PROGENITOR CELL ANTIGEN CD34 PRECURSOR.	74-108									
PCD37_HUMAN	LEUKOCYTE ANTIGEN CD37.	101-128									
PCD3G_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD3 GAMMA CHAIN PRECURSOR (T-CELL RECEPT	3-34									
PCD3L_HUMAN	CD3D LIGAND (CD3D-L).	96-130	183-217								
PCD4X_HUMAN	CD44 ANTIGEN, EPITHELIAL FORM PRECURSOR (CD44E) (PHAGOCYTIC	328-355									
PCD4_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD4 PRECURSOR (T-CELL SURFACE ANTIGEN	44-71	240-267								
PCD53_HUMAN	LEUKOCYTE SURFACE ANTIGEN CD53.	87-114									
PCD72_HUMAN	B-CELL DIFFERENTIATION ANTIGEN CD72 (LYB-2)	118-177									
PCDKJ_HUMAN	CELL DIVISION PROTEIN KINASE 3 (EC 2.7.1.-).	5-32									
PCDKJ_HUMAN	CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1.-) (KINASE PSSALRE).	5-32									
PCEBB_HUMAN	CCAAT/ENHANCER BINDING PROTEIN BETA (C/EBP BETA) (NUCLEAR FACTOR	296-330									
PCENB_HUMAN	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)	568-595									
PCENC_HUMAN	CENTROMERE PROTEIN C (CENP-C) (CENTROMERE AUTOANTIGEN C).	433-460									
PCENE_HUMAN	CENTROMERIC PROTEIN E (CENP-E PROTEIN).	372-399	493-520	533-607	715-752	767-825	850-884	903-947	963-991	1080-1107	
		1122-1149	1179-1239	1250-1277	1340-1367	1440-1481	1486-1536	1646-1680	1684-1724	1808-1846	
		1832-1883	1890-1917	1940-1988	2021-2048	2288-2318	2440-2478	2498-2563			
PCERU_HUMAN	CERULOPLASMIN PRECURSOR (EC 1.16.3.1) (FERROXIDASE).	913-940									
PCETP_HUMAN	CHOLESTERYL ESTER TRANSFER PROTEIN PRECURSOR.	71-108									
PCFTR_HUMAN	CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR).	158-189	802-829	895-922	1243-1270						
PCGCC_HUMAN	CGMP-GATED CATION CHANNEL PROTEIN (CYCLIC NUCLEOTIDE	216-243									
PCGL_HUMAN	CYSTATHIONINE GAMMA-LYASE (EC 4.4.1.1).	315-349									
PCHDR_HUMAN	CHLORDECONE REDUCTASE (EC 1.1.1.225) (CDR).	17-51									
PCHOL_HUMAN	CHORIODERAEMIA-LIKE PROTEIN.	56-97	230-257	451-478							
PCHOR_HUMAN	CHORIODERAEMIA PROTEIN (TCD PROTEIN).	112-139									
PCNA_HUMAN	SODIUM CHANNEL PROTEIN, CARDIAC AND SKELETAL MUSCLE ALPHA-SUBUNIT.	787-814	943-970								
PCLCA_HUMAN	CLATHRIN LIGHT CHAIN A (BRAIN AND LYMPHOCYTE LCA).	121-148									
PCLCB_HUMAN	CLATHRIN LIGHT CHAIN B (BRAIN AND LYMPHOCYTE LCB).	122-157									
PCLCY_HUMAN	CALCYCLIN (PROLACTIN RECEPTOR ASSOCIATED PROTEIN) (PRA) (GROWTH	9-30									
PCLUS_HUMAN	CLUSTERIN PRECURSOR (COMPLEMENT-ASSOCIATED PROTEIN SP-40,40)	36-98	223-250	367-394							
PCMGA_HUMA	CHROMOGRANIN A PRECURSOR (CGA) (CONTAINS: PANCREASTATIN AND WE-14)	93-120	430-457								
PCNTF_HUMAN	CILIARY NEUROTROPHIC FACTOR (CNTF).	66-93									
PCO20_HUMAN	TUMOR-ASSOCIATED ANTIGEN CO-029.	29-56	95-148								
PCO3_HUMAN	COMPLEMENT C3 PRECURSOR.	242-276	593-620	817-867							
PCO4_HUMAN	COMPLEMENT C4 PRECURSOR.	1293-1319									
PCO5_HUMAN	COMPLEMENT C5 PRECURSOR.	294-342	537-564	970-997	1270-1304						
PCO6_HUMAN	COMPLEMENT C6 PRECURSOR.	347-398									
PCO7_HUMAN	COMPLEMENT C7 PRECURSOR.	223-261									

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PCGENE	10/21/93:1 Motif Search on All Human Protein Sequences										
FILENAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10
PCOX1_HUMAN	CYTOCHROME C OXIDASE POLYPEPTIDE I (EC 1.9.3.1).	333-380									
PCP7A_HUMAN	CYTOCHROME P450 VII (CHOLESTEROL 7-ALPHA-MONOOXYGENASE)	263-290	346-373								
PCP2C_HUMAN	CYTOCHROME P450 IIC17 (EC 1.14.14.1) (P450-254C) (FRAGMENT).	109-136									
PCPE1_HUMAN	CYTOCHROME P450 IIE1 (EC 1.14.14.1) (P450-J) (ETHANOL INDUCIBLE).	231-258									
PCPSM_HUMAN	CARBAMOYL-PHOSPHATE SYNTHASE (AMMONIA) MITOCHONDRIAL PRECURSOR.	112-146	420-447								
PCPT2_HUMAN	MITOCHONDRIAL CARNITINE PALMITOYLTRANSFERASE II PRECURSOR.	410-437									
PCP17_HUMAN	CYTOCHROME P450 XVIA1 (P450-C17) (EC 1.14.99.9) (STEROID 17-ALPHA-	226-257									
PCYV1_HUMAN	CYTOCHROME P450 XIX A1 (AROMATASE) (EC 1.14.14.1) (ESTROGEN	234-271									
PCR1_HUMAN	COMPLEMENT RECEPTOR TYPE 1 PRECURSOR (CR1) (COMPLEMENT C3D RECEPTOR).	986-1013									
PCOLM_HUMAN	COLORECTAL MUTANT CANCER PROTEIN (MCC PROTEIN).	66-126	379-420	633-678	724-734	761-790					
PCRE8_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEINS A AND B (CREB-A AND CREB-B).	94-125									
PCRE_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEIN CRE-BP1.	380-414									
PCRP_HUMAN	C-REACTIVE PROTEIN PRECURSOR.	60-87	150-177								
PCS1_HUMAN	CLEAVAGE SIGNAL-1 PROTEIN (CS-1).	203-233									
PCSF1_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR-1 PRECURSOR (CSF-1) (M-CSF).	143-170									
PCST3_HUMAN	CLEAVAGE STIMULATION FACTOR, 50 KD SUBUNIT (CSTF 50 KD SUBUNIT) (CF-I	6-33									
PCTB5_HUMAN	CYTOCHROME B5.	1-42									
PCTNA_HUMAN	ALPHA-CATENIN (CADHERIN-ASSOCIATED PROTEIN).	681-718									
PCTNR_HUMAN	ALPHA-CATENIN RELATED PROTEIN (CATENIN ALPHA-2).	680-717									
PCX26_HUMAN	GAP JUNCTION BETA-3 PROTEIN (CONNEXIN 26) (CX26)	108-139									
PCX32_HUMAN	GAP JUNCTION BETA-1 PROTEIN (CONNEXIN 32) (CX32) (GAP JUNCTION 28 KD	117-144									
PCX37_HUMAN	GAP JUNCTION ALPHA-4 PROTEIN (CONNEXIN 37) (CX37)	824-851									
PCYG_HUMAN	CYTOKINE RECEPTOR COMMON GAMMA CHAIN PRECURSOR (GAMMA-C)	293-320									
PCYTA_HUMAN	CYSTATIN A (STEFIN A) (CYSTATIN AS).	27-58									
PDBL_HUMAN	PROTO-ONCOGENE DBL PRECURSOR (CONTAINS: MCF2)	233-283	485-524	766-793	801-845						
PDESM_HUMAN	DESMIN.	153-180	272-312								
PDESP_HUMAN	DESMOPLAKIN I AND II (DPI AND DPII) (FRAGMENT).	31-79	113-143	217-244	269-317	382-434	437-467	528-558	563-598	630-674	
		697-734	738-789	1436-1493	1508-1535						
PDHAP_HUMAN	ALDEHYDE DEHYDROGENASE, DIMERIC NADP-PREFERRING (EC 1.2.1.5)	31-58									
PDMD_HUMAN	DYSTROPHIN.	86-116	338-365	484-511	753-780	976-1003	1012-1039	1201-1228	1364-1394	1615-1674	
		1838-1865	2158-2185	2313-2343	2352-2379	2786-2830	2912-2958	3014-3041	3499-3533		
PDNU_HUMAN	DNAU PROTEIN HOMOLOG.	45-76									
PDNU_HUMAN	DNA LIGASE I (EC 6.5.1.1) (POLYDEOXYRIBONUCLEOTIDE SYNTHASE (ATP))	130-157	355-392	732-759							
PDPOA_HUMAN	DNA POLYMERASE ALPHA (EC 2.7.7.7).	23-74	1009-1057	1100-1127							
PDPOD_HUMAN	DNA POLYMERASE DELTA CATALYTIC CHAIN (EC 2.7.7.7).	728-756									
PDPP4_HUMAN	DIPEPTIDYL PEPTIDASE IV (EC 3.4.14.5) (DPP IV) (T-CELL ACTIVATION	29-77	114-148								
PDRN1_HUMAN	DEOXYRIBONUCLEASE I PRECURSOR (EC 3.1.21.1) (DNASE I).	44-71									
PDSC1_HUMAN	DESMOCOLLIN 1A/1B PRECURSOR (DESMOSOMAL GLYCOPROTEIN II AND III)	80-107	355-398								
PDSG1_HUMAN	DESMOGLEIN 1 PRECURSOR (DESMOSOMAL GLYCOPROTEIN 1) (DG1).	15-42	271-298	497-531							
PDSG3_HUMAN	DESMOGLEIN 3 PRECURSOR (130 KD PEMPHIGUS VULGARIS ANTIGEN) (PVA).	211-248	325-352								
PDUO_HUMAN	DIVERGENT UPSTREAM PROTEIN (DUP).	584-618									
PEAR1_HUMAN	V-ERBA RELATED PROTEIN EAR-1.	523-550									
PEBB2_HUMAN	EBV-INDUCED G PROTEIN-COUPLED RECEPTOR 2 (EBI2).	44-78									
PEF1B_HUMAN	ELONGATION FACTOR 1-BETA (EF-1-BETA).	105-132									
PEF1D_HUMAN	ELONGATION FACTOR 1-DELTA (EF-1-DELTA).	84-118									
PEGFR_HUMAN	EPIDERMAL GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	64-91	440-467								
PEGF_HUMAN	EPIDERMAL GROWTH FACTOR PRECURSOR, KIDNEY (EGF) (UROGASTRONE)	47-74									
PELF1_HUMAN	ETS-RELATED TRANSCRIPTION FACTOR ELF-1.	551-588									
PENPL_HUMAN	ENDOPLASMIN PRECURSOR (94 KD GLUCOSE-REGULATED PROTEIN) (GRP94) (GP96	47-74	246-273								
PENV1_HUMAN	RETROVIRUS-RELATED ENV POLYPROTEIN.	382-420									
PEPC_HUMAN	IG EPSILON CHAIN C REGION.	161-188									
PEPMO_HUMAN	EPIMORPHIN.	35-62	67-94	249-283							
PER72_HUMAN	PROTEIN DISULFIDE ISOMERASE-RELATED PROTEIN PRECURSOR (ERP72).	58-85	142-169	438-483							
PERCC1_HUMAN	DNA EXCISION REPAIR PROTEIN ERCC-1.	240-270									

BAD ORIGINAL

PCGENE	187x178x4 Motif Search on All Human Protein Sequences									
FILE_NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PERCS_HUMAN	EXCISION REPAIR PROTEIN ERCC-6.	160-209	939-973							
PESTR_HUMAN	ESTROGEN RECEPTOR (ER).	451-488								
PET1_HUMAN	ENDOTHELIN-1 PRECURSOR (ET-1).	133-160								
PET3_HUMAN	ENDOTHELIN-3 PRECURSOR (ET-3).	182-209								
PEVZA_HUMAN	EVI2A PROTEIN PRECURSOR.	29-56								
PEZR1_HUMAN	EZRIN (P81) (CYTOVILLIN) (VILLIN-2).	119-146	351-392	402-429	512-539					
PFA3_HUMAN	COAGULATION FACTOR V PRECURSOR.	2103-2137								
PFA8_HUMAN	COAGULATION FACTOR VIII PRECURSOR (PROCOAGULANT COMPONENT).	871-908	1007-1034	1194-1230						
PFA9_HUMAN	COAGULATION FACTOR IX PRECURSOR (EC 3.4.21.22) (CHRISTMAS FACTOR).	271-298								
PFABI_HUMAN	FATTY ACID-BINDING PROTEIN, INTESTINAL.	98-125								
PFCA1_HUMAN	APOPTOSIS-MEDIATING SURFACE ANTIGEN FAS PRECURSOR (APO-1 ANTIGEN).	23-50	249-301	306-333						
PFCE1_HUMAN	LOW AFFINITY IMMUNOGLOBULIN EPSILON FC RECEPTOR (LYMPHOCYTE IGE	81-115								
PFCEA_HUMAN	HIGH AFFINITY IMMUNOGLOBULIN EPSILON RECEPTOR ALPHA-SUBUNIT (FCERI)	140-174								
PFGR2_HUMAN	FIBROBLAST GROWTH FACTOR RECEPTOR 2 PRECURSOR (EC 2.7.1.112).	310-337								
PFIBA_HUMAN	FIBRINOGEN ALPHA CHAIN PRECURSOR.	131-165	427-457							
PFIBB_HUMAN	FIBRINOGEN BETA CHAIN PRECURSOR.	149-186								
PFIBG_HUMAN	FIBRINOGEN GAMMA-A CHAIN PRECURSOR.	59-93	123-160							
PFIBH_HUMAN	FIBRINOGEN GAMMA-B CHAIN (FIBRINOGEN GAMMA')	59-93	123-160							
PFINC_HUMAN	FIBRONECTIN PRECURSOR.	2168-2199								
PFLI1_HUMAN	FLI-1 ONCOGENE (ERGB TRANSCRIPTION FACTOR).	172-209								
PFMO3_HUMAN	DIMETHYLANILINE MONOOXYGENASE (N-OXIDE FORMING) 3 (EC 1.14.13.8)	184-218	256-283	301-328						
PFOS_HUMAN	FBJ-C-FOS PROTO-ONCOGENE PROTEIN.	162-193								
PFRA1_HUMAN	FOS-RELATED ANTIGEN 1.	133-168								
PFRA2_HUMAN	FOS-RELATED ANTIGEN 2.	149-180								
PFRUH_HUMAN	FERRITIN HEAVY CHAIN.	7-34								
PFRIL_HUMAN	FERRITIN LIGHT CHAIN.	3-33								
PFSHR_HUMAN	FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R).	364-393								
PFUCO_HUMAN	TISSUE ALPHA-L-FUCOSIDASE PRECURSOR (EC 3.2.1.51) (ALPHA-L-FUCOSIDASE	308-335								
PFUMH_HUMAN	FUMARATE HYDRATASE, MITOCHONDRIAL (EC 4.2.1.2) (FUMARASE).	424-451								
PG053_HUMAN	PUTATIVE LYMPHOCYTE GO/G1 SWITCH PROTEIN.	56-83								
PG1YP_HUMAN	PROTEIN KINASE C SUBSTRATE, 80 KD PROTEIN, HEAVY CHAIN (PKCSH)	146-173								
PG6PT_HUMAN	GLUCOSE-6-PHOSPHATE ISOMERASE (GPI) (EC 5.3.1.9) (PHOSPHOGLUCOSE	16-50								
PGT73_HUMAN	MAJOR GASTROINTESTINAL TUMOR-ASSOCIATED PROTEIN GA733-2 PRECURSOR	181-215								
PGA12_HUMAN	GALACTOKINASE 2 (EC 2.7.1.6).	234-281								
PGAA1_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-1 SUBUNIT PRECURSOR (GABA(A)	210-237								
PGAA3_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-3 SUBUNIT PRECURSOR (GABA(A)	211-255								
PGASR_HUMAN	GASTRIN/CHOLECYSTOKININ TYPE B RECEPTOR (CCK-B RECEPTOR).	75-105								
PGB01_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 1.	22-49								
PGB02_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 2.	22-49								
PGBAK_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(K), ALPHA SUBUNIT (GI(I) ALPHA-3)	22-49								
PGBA5_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE	7-34								
PGBAY_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(Y), ALPHA SUBUNIT (ALPHA-11)	95-122								
PGBB3_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(I)/G(S)/G(T) BETA SUBUNIT 3	65-92								
PGBLP_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUBUNIT-LIKE PROTEIN 12.3.	110-137	255-282	289-316						
PGBP2_HUMAN	INTERFERON-INDUCED GUANYLATE-BINDING PROTEIN 2 (GUANINE NUCLEOTIDE-	434-468								
PGBT2_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(T), ALPHA-2 SUBUNIT (TRANSDUCTIN	22-49								
PGCF_HUMAN	GC-RICH SEQUENCE DNA-BINDING FACTOR (GCF) (TRANSCRIPTION FACTOR 9)	200-227	293-320	367-394	396-423	647-674				
PGCH1_HUMAN	GTP CYCLOHYDROLASE I (EC 3.5.4.16).	165-192								
PGCRA_HUMAN	GLUCOCORTICOID RECEPTOR, ALPHA (GR).	167-194								
PGCRB_HUMAN	GLUCOCORTICOID RECEPTOR, BETA (GR).	167-194								
PGCSP_HUMAN	GLYCINE DEHYDROGENASE (DECARBOXYLATING) PRECURSOR (EC 1.4.4.2)	460-487								
PGDN_HUMAN	GLIA DERIVED NEXIN (GDN) (PROTEASE NEXIN I).	83-110								
PGEL3_HUMAN	GELSOLIN PRECURSOR, PLASMA (ACTIN-DEPOLYMERIZING FACTOR) (ADF)	701-728								
PGFAP_HUMAN	GLIAL FIBRILLARY ACIDIC PROTEIN, ASTROCYTE.	189-216	349-376	384-411						
PGLA5_HUMAN	N-ACETYLGLUCOSAMINE-6-SULFATASE PRECURSOR (EC 3.1.6.14) (G45)	170-221								
PGLPK_HUMAN	GLYCEROL KINASE (EC 2.7.1.30) (ATP:GLYCEROL 3-PHOSPHOTRANSFERASE)	78-112	251-278							
PGLY1_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, CYTOSOLIC (EC 2.1.2.1) (SERINE	32-59	344-371							

BAD ORIGINAL

PCGENE	107x178x4 blastl Search on All Human Protein Sequences									
FILENAME	PROTEIN	AREA1	AREA1	AREA1	AREA1	AREA3	AREA4	AREA7	AREA1	AREA2
PGLY2_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, MITOCHONDRIAL (EC 2.1.2.1) (SERINE	417-444								
PGR78_HUMAN	78 KD GLUCOSE REGULATED PROTEIN PRECURSOR (GRP 78) (IMMUNOGLOBULIN	564-591	598-625							
PGRA2_HUMAN	GLYCINE RECEPTOR ALPHA-2 CHAIN PRECURSOR.	142-169	341-368							
PGRAV_HUMAN	GRAVIN (FRAGMENT).	9-43	61-88							
PGRR_HUMAN	GROWTH HORMONE-RELEASING HORMONE RECEPTOR PRECURSOR (GHRH RECEPT	128-155								
PGTH2_HUMAN	GLUTATHIONE S-TRANSFERASE HA SUBUNIT 2 (EC 2.5.1.18) (GTH2) (CLASS-	64-91								
PGTPA_HUMAN	GTPASE-ACTIVATING PROTEIN (GAP) (RAS P21 PROTEIN ACTIVATOR).	474-501	1012-1047							
PGTR1_HUMAN	GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN.	274-301								
PGTR3_HUMAN	GLUCOSE TRANSPORTER TYPE 3, BRAIN.	272-299								
PGTR4_HUMAN	GLUCOSE TRANSPORTER TYPE 4, INSULIN-RESPONSIVE.	290-317								
PH10_HUMAN	HISTONE H1°.	44-89								
PH1A_HUMAN	HISTONE H1A (H1.1).	73-104								
PH1B_HUMAN	HISTONE H1B (H1.5).	70-101								
PH1C_HUMAN	HISTONE H1C (H1.2).	71-102								
PH1D_HUMAN	HISTONE H1D (H1.3).	70-101								
PH1T_HUMAN	HISTONE H1T.	74-105								
PH2B0_HUMAN	HISTONE H2B.1.	20-47								
PH2B2_HUMAN	HISTONE H2B.2.	20-47								
PH2B_HUMAN	HISTONE H2B (H2B.1 A).	20-47								
PHA2S_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DQ(3) ALPHA CHAIN PRECURSOR	142-169								
PHB2K_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR-W33 BETA CHAIN PRECURSOR.	56-83								
PHB2P_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(W4) BETA CHAIN PRECURSOR.	50-77								
PHB2Q_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(W2) BETA CHAIN PRECURSOR.	50-77								
PHB2S_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, SB BETA CHAIN (FRAGMENT).	16-43								
PHBGI_HUMAN	HEPARIN-BINDING GROWTH FACTOR PRECURSOR 1 (HBGF-1) (ACIDIC FIBROBLAST	102-129								
PHBGT_HUMAN	INT-2 PROTO-ONCOGENE PROTEIN PRECURSOR (HBGF-2).	61-91								
PHBG6_HUMAN	FIBROBLAST GROWTH FACTOR-6 PRECURSOR (FGF-6) (HBGF-6) (HST-2).	41-75	159-186							
PHBI_HUMAN	P59 PROTEIN (HSP BINDING IMMUNOPHILIN) (NBP) (POSSIBLE PEPTIDYL-PROLYL	264-312								
PHEM4_HUMAN	UROPORPHYRINOGEN-III SYNTHASE (EC 4.2.1.75) (UROPORPHYRINOGEN-III	74-118								
PHEP2_HUMAN	HEPARIN COFACTOR II PRECURSOR (HC-II) (PROTEASE INHIBITOR LEUSERPIN 2)	169-196								
PHEPS_HUMAN	SERINE PROTEASE HEPSIN (EC 3.4.21.-).	22-49								
PHEXA_HUMAN	BETA-HEXOSAMINIDASE ALPHA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-	356-383								
PHEXB_HUMAN	BETA-HEXOSAMINIDASE BETA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-BETA-	388-415								
PHOX1_HUMAN	HOMEOBOX PROTEIN HASH-1 (HOX-7).	178-212								
PHNFA_HUMAN	HEPATOCYTE NUCLEAR FACTOR 1-ALPHA (HNF-1A) (LIVER SPECIFIC	2-39								
PHO1_HUMAN	HEME OXYGENASE 1 (EC 1.14.99.3) (HO-1).	197-224								
PHPPD_HUMAN	4-HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD).	306-333								
PHUX_HUMAN	ZINC FINGER PROTEIN HUX.	521-548	914-974	1637-1666	2215-2286	2289-2316	3317-3344	3448-3475		
PHS1_HUMAN	HEMATOPOIETIC LINEAGE CELL SPECIFIC PROTEIN.	43-70								
PHS90_HUMAN	HEAT SHOCK PROTEIN HSP 90-ALPHA (HSP 86).	443-470	640-674							
PHSER_HUMAN	HEAT-STABLE ENTEROTOXIN RECEPTOR PRECURSOR (GC-C) (INTESTINAL	511-545								
PHSF1_HUMAN	HEAT SHOCK FACTOR PROTEIN 1 (HSF 1) (HEAT SHOCK TRANSCRIPTION FACTOR	113-140	184-209							
PHSF2_HUMAN	HEAT SHOCK FACTOR PROTEIN 2 (HSF 2) (HEAT SHOCK TRANSCRIPTION FACTOR	117-198								
PHV2I_HUMAN	IG HEAVY CHAIN V-III REGION (JAH-77).	67-104								
PHVDT_HUMAN	IG HEAVY CHAIN V-III REGION (GAL).	47-74								
PHOX11_HUMAN	HOMEOBOX PROTEIN HOX-11 (TCL-3 PROTO-ONCOGENE).	263-289								
PHOB7_HUMAN	HOMEOBOX PROTEIN HOX-B7 (HOX-2C) (HHO.C1).	135-162								
PIAPP_HUMAN	ISLET AMYLOID POLYPEPTIDE	53-80								
PIBP3_HUMAN	INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3 PRECURSOR (IGFBP-3)	183-210								
PIC1_HUMAN	PLASMA PROTEASE C1 INHIBITOR PRECURSOR (C1 INH).	251-278								
PICA2_HUMAN	INTERCELLULAR ADHESION MOLECULE-2 PRECURSOR (ICAM-2).	57-84								
PIDE_HUMAN	INSULIN-DEGRADING ENZYME (EC 3.4.99.45) (INSULINASE) (INSULIN	474-504	907-941							
PIF4I_HUMAN	EUKARYOTIC INITIATION FACTOR 4A-I (EIF-4A-I).	322-349								
PIF4B_HUMAN	INTRINSIC FACTOR PRECURSOR (IF) (GASTRIC INTRINSIC FACTOR).	149-176	406-433							
PIF_HUMAN	INHIBIN BETA A CHAIN PRECURSOR (ACTIVIN BETA-A CHAIN) (ERYTHROID	308-349								
PIL1A_HUMAN	INTERLEUKIN-1 ALPHA PRECURSOR (IL-1 ALPHA) (HEMATOPOIETIN-1).	80-107	183-210							
PIL1R_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	76-110	172-199							

BAD ORIGINAL

PCGENE	107:117bit Motif Search on All Human Protein Sequences									
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIL1R_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	417-467								
PIL1S_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE II PRECURSOR (IL-1R2).	119-186								
PIL5R_HUMAN	INTERLEUKIN-5 RECEPTOR ALPHA CHAIN PRECURSOR (IL-5R-ALPHA).	87-114								
PIL6_HUMAN	INTERLEUKIN-6 PRECURSOR (IL-6) (B-CELL STIMULATORY FACTOR 2) (BSF-2)	112-139								
PINA1_HUMAN	INTERFERON ALPHA-1 PRECURSOR.	94-121								
PINAR_HUMAN	INTERFERON-ALPHA RECEPTOR PRECURSOR (IFN-ALPHA-REC).	90-117	164-191	300-327	508-535					
PINB_HUMAN	INTERFERON BETA PRECURSOR (FIBROBLAST).	88-129								
PINI1_HUMAN	INTERFERON-INDUCED 17 KD PROTEIN (CONTAINS: INTERFERON-INDUCED 15 KD	83-121								
PINI6_HUMAN	INTERFERON-INDUCED 56 KD PROTEIN (IFI-56K).	51-78	216-245	393-420						
PINSR_HUMAN	INSULIN RECEPTOR PRECURSOR (EC 2.7.1.112) (IR).	592-619								
PINVO_HUMAN	INVOLUCRIN.	119-146	229-273	326-363	386-450					
PIPJK_HUMAN	1D-MYO-INOSITOL-TRISPHOSPHATE 3-KINASE A (EC 2.7.1.127) (INOSITOL	121-162								
PIPSP_HUMAN	PLASMA SERINE PROTEASE (PROTEIN C) INHIBITOR PRECURSOR (PCI)	90-117	206-233							
PIRBP_HUMAN	INTERPHOTORECEPTOR RETINOID-BINDING PROTEIN PRECURSOR (IRBP)	670-697								
PIRF1_HUMAN	INTERFERON REGULATORY FACTOR 1 (IRF-1).	157-191								
PIT1P_HUMAN	75 KD INOSITOL-1,4,5-TRISPHOSPHATE 5-PHOSPHATASE PRECURSOR	233-262								
PITA2_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IA PRECURSOR (GPIA) (COLLAGEN RECEPTO	579-606	900-927							
PITA5_HUMAN	FIBRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-F)	230-284	785-792							
PITA6_HUMAN	INTEGRIN ALPHA-6 PRECURSOR (VLA-6) (INTEGRIN ALPHA-E) (CD49F).	884-911	944-974							
PITAL_HUMAN	LEUKOCYTE ADHESION GLYCOPROTEIN LFA-1 ALPHA CHAIN PRECURSOR (LEUKOC	236-283	310-341	795-822						
PITAM_HUMAN	CELL SURFACE GLYCOPROTEIN MAC-1 ALPHA SUBUNIT PRECURSOR (CR-3 ALPHA	1044-1078								
PITAV_HUMAN	VITRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-V)	230-284								
PITB1_HUMAN	FIBRONECTIN RECEPTOR BETA SUBUNIT PRECURSOR (INTEGRIN BETA-1) (CD29)	218-245	354-399							
PITB2_HUMAN	CELL SURFACE ADHESION GLYCOPROTEINS LFA-1, CR3 AND P150,95, BETA-	339-366	705-732							
PITB3_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IIIA PRECURSOR (GPIIIA) (INTEGRIN BETA-	324-351								
PITB4_HUMAN	INTEGRIN BETA-4 SUBUNIT PRECURSOR (GP196).	342-369								
PITB5_HUMAN	INTEGRIN BETA-5 SUBUNIT PRECURSOR.	724-751								
PITB6_HUMAN	INTEGRIN BETA-6 SUBUNIT PRECURSOR.	311-338	352-393							
PITB8_HUMAN	INTEGRIN BETA-8 SUBUNIT PRECURSOR.	362-399	696-737							
PITI2_HUMAN	INTER-ALPHA-TRYPSIN INHIBITOR COMPLEX COMPONENT II PRECURSOR.	134-161	423-452	772-818						
PK1C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 10 (CYTOKERATIN 10) (K10).	154-187	196-227	337-399	428-462					
PK1C4_HUMAN	KERATIN, TYPE I CYTOSKELETAL 13 (CYTOKERATIN 13) (K13).	113-142								
PK1C5_HUMAN	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14).	122-152	306-335	393-424						
PK1C6_HUMAN	KERATIN, TYPE I CYTOSKELETAL 15 (CYTOKERATIN 15) (K15).	113-143								
PK1C8_HUMAN	KERATIN, TYPE I CYTOSKELETAL 16 (CYTOKERATIN 16) (K16).	308-339								
PK1C9_HUMAN	KERATIN, TYPE I CYTOSKELETAL 17 (CYTOKERATIN 17) (K17).	122-152	302-346	393-431						
PK1CA_HUMAN	KERATIN, TYPE I CYTOSKELETAL 18 (CYTOKERATIN 18) (K18).	87-114	251-298	337-385						
PK1CB_HUMAN	KERATIN, TYPE I CYTOSKELETAL 19 (CYTOKERATIN 19) (K19).	88-118	317-362	370-397						
PK2C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 1 (CYTOKERATIN 1) (K1) (CYTOSKELETAL 67	196-226	346-384	390-467						
PK2C2_HUMAN	KERATIN, TYPE II CYTOSKELETAL 65 KD.	215-248	364-405	461-488						
PK2C3_HUMAN	KERATIN, TYPE II CYTOSKELETAL 4 (CYTOKERATIN 4) (K4) (FRAGMENT)	42-73	126-153	189-248						
PK2C5_HUMAN	KERATIN, TYPE II CYTOSKELETAL 5 (CYTOKERATIN 5) (K5) (58 KD	185-246	332-373							
PK2C6_HUMAN	KERATIN, TYPE II CYTOSKELETAL 6 (CYTOKERATIN 6) (K6B KERATIN).	178-239	325-366	422-449						
PK2C8_HUMAN	KERATIN, TYPE II CYTOSKELETAL 8 (CYTOKERATIN 8) (K8).	140-167								
PK6PF_HUMAN	6-PHOSPHOFRUCTOKINASE, MUSCLE TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	7-34	120-161	217-244						
PK6PL_HUMAN	6-PHOSPHOFRUCTOKINASE, LIVER TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	49-80	128-159							
PKABL_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE ABL (EC 2.7.1.112) (P150)	498-525								
PKAC_HUMAN	IG KAPPA CHAIN C REGION.	37-45								
PKALM_HUMAN	KALLMANN SYNDROME PROTEIN PRECURSOR (ADHESION MOLECULE-LIKE X-LINK)	380-414								
PKAP0_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-ALPHA REGULATORY CHAIN	178-206								
PKAP1_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-BETA REGULATORY CHAIN	177-204								
PKAP2_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE II-ALPHA REGULATORY CHAIN	175-202	290-317							
PKCB1_HUMAN	NUCLEAR FACTOR KAPPA-B SUBUNIT-1 (NF-KAPPA-B P105 SUBUNIT)	529-570								
PKCB_HUMAN	CREATINE KINASE, B CHAIN (EC 2.7.3.2).	301-328								
PKECK_HUMAN	TYROSINE PROTEIN-KINASE ECK PRECURSOR (EC 2.7.1.112) (EPITHELIAL CELL	466-493								
PKFER_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FER (EC 2.7.1.112) (P94-FER)	219-246	364-391							

BAD ORIGINAL

PCGENE	107x17a1 Motif Search on All Human Protein Sequences										
FILE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	
PKFES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FES/FPS (EC 2.7.1.112) (C-FES).	101-145	295-322						1		
PKFLT_HUMAN	RECEPTOR-RELATED TYROSINE KINASE FLT PRECURSOR (EC 2.7.1.112).	208-235	319-353								
PKFMS_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR I RECEPTOR PRECURSOR (CSF-1-R)	293-320									
PKFYN_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FYN (EC 2.7.1.112) (P59-FYN)	199-233									
PKGP3_HUMAN	CGMP-DEPENDENT PROTEIN KINASE, BETA ISOZYME (COK) (EC 2.7.1.37).	17-54									
PKHEK_HUMAN	TYROSINE KINASE HEK RECEPTOR PRECURSOR (EC 2.7.1.112).	644-671									
PKIN1_HUMAN	KINESIN HEAVY CHAIN.	125-155	425-452	471-542	633-680	689-716	872-899				
PKIT_HUMAN	KIT PROTO-ONCOGENE TYROSINE KINASE PRECURSOR (EC 2.7.1.112).	235-263									
PKMET_HUMAN	HEPATOCYTE GROWTH FACTOR RECEPTOR PRECURSOR (MET PROTO-ONCOGENE	898-925									
PKNH_HUMAN	KINTROGEN, HAW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR)	505-532									
PKPSI_HUMAN	GALACTOSYLTRANSFERASE ASSOCIATED PROTEIN KINASE PSI/GTA (EC 2.7.1.-).	81-108									
PKPR_HUMAN	INTERFERON-INDUCED, DOUBLE-STRANDED RNA-ACTIVATED PROTEIN KINASE	169-179	191-225	285-312							
PKPT8_HUMAN	PUTATIVE SERINE/THREONINE-PROTEIN KINASE PTK (EC 2.7.1.-)	582-609									
PKPCL_HUMAN	PROTEIN KINASE C, ETA TYPE (EC 2.7.1.-) (NPKC-ETA) (PKC-L).	318-345									
PKPTI_HUMAN	SERINE/THREONINE-PROTEIN KINASE PCTAIRE-1 (EC 2.7.1.-).	149-176	209-353						4		
PKPY1_HUMAN	PYRUVATE KINASE, M1 (MUSCLE) ISOZYME (EC 2.7.1.40) (CYTOSOLIC THYROID	243-289									
PKPY2_HUMAN	PYRUVATE KINASE, M2 ISOZYME (EC 2.7.1.40).	243-289									
PKPYR_HUMAN	PYRUVATE KINASE, ISOZYME R (EC 2.7.1.40).	2-29									
PKRET_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE RET (EC 2.7.1.112).	183-217									
PKROS_HUMAN	ROS PROTO-ONCOGENE TYROSINE-PROTEIN KINASE (EC 2.7.1.112) (FRAGMENT).	157-203									
PKSRC_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE SRC (EC 2.7.1.112) (P60-SRC)	143-170									
PKU7_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P70 (70 KD SUBUNIT OF KU ANTIGEN).	233-279									
PKU86_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P86 (86 KD SUBUNIT OF KU ANTIGEN).	238-292									
PKYES3_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE YES (EC 2.7.1.112) (P61-YES)	269-243									
PLAM1_HUMAN	LAMIN B1.	32-66	117-144	152-193	214-241	397-424	480-507	510-539			
PLAMA_HUMAN	LAMIN A (70 KD LAMIN).	32-88	114-165	292-343							
PLAMC_HUMAN	LAMIN C.	32-88	114-165	292-343					1		
PLA_HUMAN	LAR PROTEIN PRECURSOR (LEUKOCYTE ANTIGEN RELATED) (EC 3.1.3.48).	933-969									
PLA_HUMAN	LUPUS LA PROTEIN (SJOGREN SYNDROME TYPE B ANTIGEN (SS-B)).	191-222	295-342								
PLCAT_HUMAN	PHOSPHATIDYLCHOLINE-STEROL ACYLTRANSFERASE PRECURSOR (EC 2.3.1.43)	131-158									
PLDHH_HUMAN	L-LACTATE DEHYDROGENASE H CHAIN (EC 1.1.1.27) (LDH-H).	81-108	302-329						4		
PLDHM_HUMAN	L-LACTATE DEHYDROGENASE M CHAIN (EC 1.1.1.27) (LDH-A).	225-252									
PLDLR_HUMAN	LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR.	483-510									
PLEC1_HUMAN	ASIALOGLYCOPROTEIN RECEPTOR 1 (HEPATIC LECTIN H1) (ASGPR).	62-96									
PLEAD_HUMAN	P-SELECTIN PRECURSOR (GRANULE MEMBRANE PROTEIN 140) (GMP-140) (PADGEM)	32-59	87-116								
PLGUL_HUMAN	LACTOYLGLUTATHIONE LYASE (EC 4.4.1.5) (METHYLGLYOXALASE)	83-117									
PLIF_HUMAN	LEUKAEMIA INHIBITORY FACTOR PRECURSOR (LIF) (DIFFERENTIATION-	95-122									
PLIN1_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG.	132-179	232-263	298-358	671-698	874-901	1026-1046				
PLIPO_HUMAN	TRIACYLGLYCEROL LIPASE PRECURSOR (EC 3.1.1.3) (LIPASE, GASTRIC).	158-185									
PLIP3_HUMAN	HORMONE SENSITIVE LIPASE (EC 3.1.1.-) (HSL).	305-332									
PLKHA_HUMAN	LEUKOTRIENE A-4 HYDROLASE (EC 3.3.2.6) (LTA-4 HYDROLASE) (LEUKOTRIENE	42-83	296-324								
PLMA_HUMAN	LAMININ A CHAIN PRECURSOR.	1318-1345	1741-1771	1785-1812	1824-1851	1884-1921	1965-1999	2026-2059	2091-2118		
PLMB1_HUMAN	LAMININ B1 CHAIN PRECURSOR.	1287-1314	1364-1394	1397-1431	1651-1714	1722-1781					
PLMB2_HUMAN	LAMININ B2 CHAIN PRECURSOR.	1103-1135	1513-1547								
PLMP2_HUMAN	LYSOSOME-ASSOCIATED MEMBRANE GLYCOPROTEIN 2 PRECURSOR (LAMP-2).	155-182									
PLOX2_HUMAN	ARACHIDONATE 12-LIPOXYGENASE (EC 1.13.11.31) (12-LOX).	341-368									
PLOX5_HUMAN	ARACHIDONATE 5-LIPOXYGENASE (EC 1.13.11.34) (5-LIPOXYGENASE) (5-LO).	50-87									
PLPH_HUMAN	LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62)	776-803									
PLPP8_HUMAN	PROTEIN-TYROSINE PHOSPHATASE BETA PRECURSOR (EC 3.1.3.48) (PTP-BETA).	140-167	589-637								
PLPPG_HUMAN	PROTEIN-TYROSINE PHOSPHATASE GAMMA PRECURSOR (EC 3.1.3.48)	1081-1108									
PLPPZ_HUMAN	PROTEIN-TYROSINE PHOSPHATASE ZETA PRECURSOR (EC 3.1.3.48) (PTP-ZETA).	553-587	1024-1051	1973-2000							
PLSHR_HUMAN	LUTROPIN-CHORIOGONADOTROPIC HORMONE RECEPTOR PRECURSOR (LH/CG-R)	66-114	448-480								
PLV2B_HUMAN	IG LAMBDA CHAIN V-II REGION (NIE).	61-88									
PLYAG_HUMAN	LYSOSOMAL ALPHA-GLUCOSIDASE PRECURSOR (EC 3.2.1.20) (ACID MALTASE).	885-912									
PMOM_HUMA	MITOCHONDRIAL 2-OXOGLUTARATE/MALATE CARRIER PROTEIN (OGCP).	50-77									
PMAC2_HUMAN	GALACTOSE-SPECIFIC LECTIN (MAC-2 ANTIGEN) (IGE-BINDING PROTEIN) (35 KD	219-246									
PMAN9_HUMAN	MANNOSYL-ALPHA-MANNOSIDASE (EC 3.2.1.-).	414-441									

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PCGENE	107x117x4 Motif Search on All Human Protein Sequences									
FILE NAME	PROTEIN	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2	AREA 2	AREA 2
PMANA_HUMA	MANNOSE-6-PHOSPHATE ISOMERASE (EC 5.3.1.8) (PHOSPHOMANNOSE ISOMERASE)	60-87								
PMANF_HUMAN	MACROPHAGE MANNOSE RECEPTOR PRECURSOR.	248-284	1147-1182							
PMAP2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 2 (FRAGMENT).	434-478								
PMAP4_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 4.	408-449								
PMAX_HUMAN	MAX PROTEIN.	117-144								
PMDM2_HUMA	MDM2 PROTEIN (P53-ASSOCIATED PROTEIN).	233-288								
PMDR1_HUMAN	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1).	581-595								
PMEBL_HUMAN	MERLIN (SCHWANNOMIN).	177-407	532-566							
PMEH2_HUMAN	MEROSIN HEAVY CHAIN (LAMININ CHAIN A2) (FRAGMENT).	71-105	139-173	431-458	791-818					
PMGMT_HUMA	METHYLATED-DNA--PROTEIN-CYSTEINE METHYLTRANSFERASE (EC 2.1.1.63) (6-O-	91-118		267-294	319-346	510-537	569-608			
PMKLP_HUMAN	MITOTIC KINESIN-LIKE PROTEIN-1.									
PMLCH_HUMAN	MELANIN-CONCENTRATING HORMONE PRECURSOR.	8-35								
PMLK1_HUMAN	MIXED LINEAGE KINASE 1 (EC 2.7.1.-) (FRAGMENT).	130-157	321-348							
PMOHA_HUMA	METHYLMALONATE-SEMIALDEHYDE DEHYDROGENASE	393-420								
PMOES_HUMAN	MOESIN (MEMBRANE-ORGANIZING EXTENSION SPIKE PROTEIN).	119-146	331-402							
PMPCP_HUMAN	MITOCHONDRIAL PHOSPHATE CARRIER PROTEIN PRECURSOR.	286-313								
PMPD1_HUMAN	M-PHASE INDUCER PHOSPHATASE 3 (EC 3.1.3.48).	72-99								
PMPTK_HUMAN	MACROPHAGE SCAVENGER RECEPTOR, TYPES I AND II (MACROPHAGE ACETYLATED	173-204	230-260							
PMPU_HUMAN	DUAL SPECIFICITY MITOGEN-ACTIVATED PROTEIN KINASE KINASE (EC 2.7.1.-)	19-50								
PMQP_HUMAN	CATION-INDEPENDENT MANNOSE-6-PHOSPHATE RECEPTOR PRECURSOR (CI MAN-6-	1369-1396	2437-2478							
PMSHR_HUMAN	MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN.	396-423	507-548							
PMSHR_HUMAN	MELANOCYTE STIMULATING HORMONE RECEPTOR (MSH-R) (MELANOTROPIN	38-65								
PMSSR_HUMAN	MACROPHAGE SCAVENGER RECEPTOR, TYPES I AND II (MACROPHAGE ACETYLATED	173-204	230-260							
PMTDM_HUMA	DNA (CYTOSINE-5)-METHYLTRANSFERASE (EC 2.1.1.37) (DNA	387-414	601-628							
PMTF1_HUMAN	MITOCHONDRIAL TRANSCRIPTION FACTOR 1 PRECURSOR (MTTF1).	181-212								
PMUTA_HUMAN	METHYLMALONYL-COA MUTASE PRECURSOR (EC 5.4.99.2) (MCM).	468-519								
PMX1_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXA (INTERFERON-	108-150								
PMXO_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXB (P78-RELATED	451-489	670-697							
PMYBA_HUMA	MYB-RELATED PROTEIN A (FRAGMENT).	619-646								
PMYBB_HUMAN	MYB-RELATED PROTEIN B.	87-117								
PMYCN_HUMA	N-MYC PROTO-ONCOGENE PROTEIN.	263-300	413-461							
PMYC_HUMAN	MYC PROTO-ONCOGENE PROTEIN.	393-422								
PMYF4_HUMAN	MYOGENIC FACTOR MYF-4 (MYOGENIN).	119-146								
PMYF5_HUMAN	MYOGENIC FACTOR MYF-5.	121-148								
PMYP2_HUMAN	MYELIN P2 PROTEIN.	70-110								
PMYPR_HUMAN	MYELIN PROTEOLIPID PROTEIN (PLP) (LIPOPHILIN) (CONTAINS: MYELIN	43-70								
PMYSA_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE ALPHA ISOFORM (FRAGMENT).	38-75	84-111	137-178	236-324	398-435	440-485			
PMYSB_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE BETA ISOFORM.	48-75	951-981	997-1044	1088-1122	1192-1234	1266-1332	1360-1408	1442-1479	1488-1532
PMYSE_HUMAN	MYOSIN HEAVY CHAIN, FAST SKELETAL MUSCLE, EMBRYONIC.	1541-1582	1640-1681	1683-1710	1801-1838					
PMYSP_HUMAN	MYOSIN HEAVY CHAIN, PERINATAL CARDIAC MUSCLE (FRAGMENT).	46-73	860-903	933-1077	1119-1146	1193-1235	1267-1340	1364-1411	1483-1597	1641-1675
PMYSS_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (FRAGMENT).	1707-1734	1827-1858							
PMYTI_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT).	50-77	95-123	141-188	215-272	403-483	507-552	586-624	685-736	784-818
PNACA_HUMAN	SODIUM/CALCIUM EXCHANGER PRECURSOR (NA+/CA2+-EXCHANGE PROTEIN).	823-907	946-987	1049-1078						
PNCA3_HUMAN	NEURAL CELL ADHESION MOLECULE, PHOSPHATIDYLINOSITOL-LINKED ISOFORM	133-160	193-280	304-349	423-460	468-526	581-608	645-681	743-798	808-835
PNCF1_HUMAN	NEUTROPHIL CYTOSOL FACTOR 1 (NCF-47K) (47 KD AUTOSOMAL CHRONIC		846-873							
PNCF2_HUMAN	NEUTROPHIL NADPH OXIDASE FACTOR (P67-PHOX).	640-671								
PNEFA_HUMAN	DNA-BINDING PROTEIN NFEA PRECURSOR.	492-519	594-621	705-735						
PNEP_HUMAN	NEPRILYSIN (EC 3.4.24.11) (NEUTRAL ENDOPEPTIDASE) (NEP).	215-282								
PNF1_HUMAN	NEUROFIBROMIN (NEUROFIBROMATOSIS-RELATED PROTEIN NF-1) (FRAGMENT).	234-261	310-337							
PNFH_HUMAN	NEUROFILAMENT TRIPLET H PROTEIN (200 KD NEUROFILAMENT PROTEIN) (NF-H).	5-32								
PNFL_HUMAN	NEUROFILAMENT TRIPLET L PROTEIN (68 KD NEUROFILAMENT PROTEIN) (NF-L).	50-77	82-112	343-393						
PNFM_HUMAN	NEUROFILAMENT TRIPLET M PROTEIN (160 KD NEUROFILAMENT PROTEIN) (NF-M).	170-216	644-671							
PNK1R_HUMAN	SUBSTANCE-P RECEPTOR (SPR) (NK-1 RECEPTOR) (NK-1R).	1145-1172	1388-1422	1639-1666						
PNK1_HUMAN	NATURAL KILLER CELLS PROTEIN 4 PRECURSOR.	91-128	431-490							
		92-126	441-468							
		101-141	164-194	215-280	315-372	733-764	794-826	872-913		
		338-365								
		166-193								

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PCGENE	107x178x4 Motif Search on All Human Protein Sequences									
FILE NAME	PROTEIN	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNKCR_HUMAN	NK-TUMOR RECOGNITION PROTEIN (NATURAL-KILLER CELLS CYCLOPHILIN-	187-214	448-475	559-599	701-742	816-843	1080-1133			
PNKQA_HUMAN	NKG2-A AND NKG2-B TYPE II INTEGRAL MEMBRANE PROTEINS.	28-55								
PNOS1_HUMAN	NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I).	389-416	1116-1146	1292-1319						
PNOS3_HUMAN	NITRIC-OXIDE SYNTHASE, ENDOTHELIAL (EC 1.14.13.39) (EC-NOS) (NOS,	389-416								
PNTG1_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT GABA TRANSPORTER 1.	131-158								
PNTR_HUMAN	NEUROTENSIN RECEPTOR (NT-R).	57-84								
PNTSE_HUMAN	SODIUM-DEPENDENT SEROTONIN TRANSPORTER (5HT TRANSPORTER) (SLC6A4).	71-98								
PNTTA_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT TAURINE TRANSPORTER.	120-147								
PNU2M_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 2 (EC 1.6.5.3).	202-240								
PNU4M_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4 (EC 1.6.5.3).	164-191	372-399							
PNUBN_HUMAN	NUCLEOBINDIN PRECURSOR.	46-73	360-387							
PNUCL_HUMAN	NUCLEOLIN (PROTEIN C23).	462-508								
PNY3R_HUMAN	PUTATIVE NEUROPEPTIDE Y RECEPTOR TYPE 3 (NPY3-R) (FB22) (NPYRL).	115-142								
POAT_HUMAN	ORNITHINE AMINOTRANSFERASE PRECURSOR (EC 2.6.1.13) (ORNITHINE--OXO-	98-128								
POCJA_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 3A (OCT-3A).	139-173								
POCJB_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 3B (OCT-3B).	37-78								
POCRL_HUMAN	LOWE'S OCULOCEREBRORENAL SYNDROME PROTEIN.	704-735								
PODB2_HUMAN	LIPOAMIDE ACYLTRANSFERASE COMPONENT (E2) PRECURSOR OF BRANCHED-CHA	100-127	375-402							
PODP2_HUMAN	DIHYDROLIPOAMIDE ACETYLTRANSFERASE COMPONENT (E2) OF PYRUVATE	72-99								
POMGP_HUMAN	OLIGODENDROCYTE-MYELIN GLYCOPROTEIN PRECURSOR (OMG).	53-80								
POPSB_HUMAN	BLUE-SENSITIVE OPSIN (BLUE CONE PHOTORECEPTOR PIGMENT).	220-247								
POPSG_HUMAN	GREEN-SENSITIVE OPSIN (GREEN CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POPSR_HUMAN	RED-SENSITIVE OPSIN (RED CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POSTP_HUMAN	OSTEOPONTIN PRECURSOR (BONE SIALOPROTEIN I) (URINARY STONE PROTEIN)	239-266								
POTC_HUMAN	ORNITHINE CARBAMOYLTRANSFERASE PRECURSOR (EC 2.1.3.3).	170-204								
POTNC_HUMAN	OSTEONECTIN PRECURSOR (BASEMENT MEMBRANE PROTEIN BM-40).	173-207								
POXYB_HUMAN	OXYSTEROL-BINDING PROTEIN.	89-123	190-217	290-317	577-604					
POXYR_HUMAN	OXYTOCIN RECEPTOR (OT-R).	350-377								
PP107_HUMAN	RETINOBLASTOMA-ASSOCIATED PROTEIN-LIKE 107 KD HOMOLOG (P107)	159-186	422-449							
PP1DP_HUMAN	DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1.	19-60	637-664							
PP47_HUMAN	PLECKSTRIN (P47).	298-325								
PP4HA_HUMAN	PROLYL 4-HYDROXYLASE ALPHA SUBUNIT PRECURSOR (EC 1.14.11.2).	29-69	191-218							
PP60_HUMAN	MITOCHONDRIAL MATRIX PROTEIN P1 PRECURSOR (P60 LYMPHOCYTE PROTEIN)	72-99	271-298	361-407						
PP85A_HUMAN	PHOSPHATIDYLINOSITOL 3-KINASE REGULATORY ALPHA SUBUNIT (PI3-KINASE	12-39	428-476	586-613	688-715					
PPAP1_HUMAN	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR.	77-104								
PPAX5_HUMAN	PAIRED BOX PROTEIN PAX-5 (B-CELL SPECIFIC TRANSCRIPTION FACTOR)	157-187								
PPDGA_HUMAN	PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)	38-65								
PPECI_HUMAN	PLATELET ENDOTHELIAL CELL ADHESION MOLECULE PRECURSOR (PECAM-1)	685-719								
PPENK_HUMAN	PROENKEPHALIN A PRECURSOR.	142-176								
PPERE_HUMAN	EOSINOPHIL PEROXIDASE PRECURSOR (EC 1.11.1.7) (EPO) (FRAGMENT)	308-335								
PPERF_HUMAN	PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP).	411-438								
PPF4L_HUMAN	PLATELET BASIC PROTEIN PRECURSOR (PBP) (CONTAINS: CONNECTIVE-TISSUE	21-55								
PPGCA_HUMAN	CARTILAGE-SPECIFIC PROTEOGLYCAN CORE PROTEIN PRECURSOR (CSPCP)	73-100								
PPGCS_HUMAN	LARGE FIBROBLAST PROTEOGLYCAN PRECURSOR (VERSICAN) (CHONDROITIN	64-98	1390-1417	1553-1580						
PPGDH_HUMAN	15-HYDROXYPROSTAGLANDIN DEHYDROGENASE (NAD(+)) (EC 1.1.1.141) (PGDH)	87-118								
PPGDR_HUMAN	BETA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	294-321	354-384	465-495						
PPGDS_HUMAN	ALPHA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR.	64-94	347-395	461-488	524-551	986-1058				
PPGHS_HUMAN	PROSTAGLANDIN G/H SYNTHASE PRECURSOR (EC 1.14.99.1) (CYCLOOXYGENASE)	331-358								
PPGS1_HUMAN	BONE/CARTILAGE PROTEOGLYCAN I PRECURSOR (BIGLYCAN) (PG-S1).	100-127								
PPHH_HUMAN	PHENYLALANINE-4-HYDROXYLASE (EC 1.14.16.1) (PAH) (PHE-4-	239-266								
PPHB_HUMAN	PROHIBITIN.	41-68								
PPHOS_HUMAN	PHOSDUCIN (33 KD PHOTOTRANSDUCING PROTEIN) (MEKA PROTEIN).	184-225								
PPHS1_HUMAN	GLYCOGEN PHOSPHORYLASE, LIVER FORM (EC 2.4.1.1).	116-143								
PPHS2_HUMAN	GLYCOGEN PHOSPHORYLASE, MUSCLE FORM (EC 2.4.1.1).	532-559								
PPHSJ_HUMAN	GLYCOGEN PHOSPHORYLASE, BRAIN FORM (EC 2.4.1.1).	533-560								
PPID4_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE BETA 2	908-935								

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PCGENE	10Jul17h4 Motif Search on All Human Protein Sequences										
TITLE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPID3_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE GAMMA 2	142-169	219-266							
PPLAK_HUMAN	PLAKOGLOBIN (DESMOPLAKIN III)	373-400								
PPLSL_HUMAN	L-PLASTIN (FIMBRIN)	507-534								
PPLST_HUMAN	T-PLASTIN (FIMBRIN)	510-561								
PPM23_HUMAN	PERIPHERAL MYELIN PROTEIN 22 (PMP-22).	3-33								
PPMGB_HUMAN	PHOSPHOGLYCERATE MUTASE, BRAIN FORM (EC 5.4.2.1) (PGAM-B) (EC 5.4.2.4)	81-111								
PPMGM_HUMA	PHOSPHOGLYCERATE MUTASE, MUSCLE FORM (EC 5.4.2.1) (PGAM-M)	81-113								
PPML1_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-1.	531-585								
PPMLX_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-X.	531-585								
PPMSC_HUMAN	AUTOANTIGEN PM-SCL.	101-130								
PPOGA_HUMAN	DNA-BINDING PROTEIN PO-GA.	14-51	182-209	610-637	667-699					
PPOL1_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE	774-804								
PPOL2_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (FRAGMENT).	78-138	171-205							
PPORI_HUMAN	OUTER MITOCHONDRIAL MEMBRANE PROTEIN PORIN (VOLTAGE-DEPENDENT ANIC	33-76	189-216							
PPPAP_HUMAN	PROSTATIC ACID PHOSPHATASE PRECURSOR (EC 3.1.3.2)	235-269								
PPPA5_HUMAN	RED CELL ACID PHOSPHATASE 1, ISOZYME S (EC 3.1.3.2) (ACP1).	26-53								
PPPOL_HUMAN	NAD(+) ADP-RIBOSYLTRANSFERASE (EC 2.4.2.30) (POLY (ADP-RIBOSE)	699-729	972-1001							
PPRC1_HUMAN	PROTEASOME COMPONENT C2 (EC 3.4.99.46) (MACROPAIN SUBUNIT C2)	39-66								
PPRC3_HUMAN	PROTEASOME COMPONENT C3 (EC 3.4.99.46) (MACROPAIN SUBUNIT C3)	34-61								
PPRC9_HUMAN	PROTEASOME COMPONENT C9 (EC 3.4.99.46) (MACROPAIN SUBUNIT C9)	203-261								
PPRGR_HUMAN	PROGESTERONE RECEPTOR (PR) (FORMS A AND B).	646-690								
PPRT3_HUMAN	VITAMIN K-DEPENDENT PROTEIN S (BLOOD CLOTTING) PRECURSOR.	337-371								
PPRTZ_HUMAN	VITAMIN K-DEPENDENT PROTEIN Z PRECURSOR.	28-56								
PPSOR_HUMAN	PSORIASIN.	65-92								
PPSPD_HUMAN	PULMONARY SURFACTANT-ASSOCIATED PROTEIN D PRECURSOR (PSP-D) (SP-D).	224-251								
PPTHY_HUMAN	PARATHYROID HORMONE PRECURSOR (PARATHYRIN).	86-113								
PPTN1_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1B (EC 3.1.3.48) (PTP-1B).	136-177								
PPTN2_HUMAN	T-CELL PROTEIN-TYROSINE PHOSPHATASE (EC 3.1.3.48) (TCPTP).	59-86	138-178							
PPTN6_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1C (EC 3.1.3.48) (PTP-1C) (HEMATOPOIETIC	227-261	512-580							
PPTN8_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 2C (EC 3.1.3.48) (PTP-2C) (PTP-1D)	41-68	218-245							
PPTNC_HUMAN	PROTEIN-TYROSINE PHOSPHATASE G1 (EC 3.1.3.48) (PTPG1).	618-645	695-722							
PPTHR_HUMAN	PARATHYROID HORMONE/PARATHYROID HORMONE-RELATED PEPTIDE	368-395								
PPTX1_HUMAN	PENTAXIN-RELATED PROTEIN PTX1 PRECURSOR.	74-101								
PPUR3_HUMAN	PHOSPHORIBOSYLAMIDE--GLYCINE LIGASE (EC 6.3.4.13) (GARS) (GLYCINAMIDE	803-830								
PPUR6_HUMAN	MULTIFUNCTIONAL PROTEIN ADE2H1 (PHOSPHORIBOSYLAMINOIMIDAZOLE-	391-418								
PPUR8_HUMAN	ADENYLOSUCCINATE LYASE (EC 4.3.2.2) (ADENYLOSUCCINASE) (ASL).	204-231								
PPYR5_HUMAN	URIDINE 5'-MONOPHOSPHATE SYNTHASE (UMP SYNTHASE) (OROTATE	120-150								
PPYRO_HUMAN	CTP SYNTHASE (EC 6.3.4.2) (UTP--AMMONIA LIGASE) (CTP SYNTHETASE).	86-113	200-334							
PPZP_HUMAN	PREGNANCY ZONE PROTEIN PRECURSOR.	315-354	990-1024	1162-1189	1405-1432					
PRA74_HUMAN	TRANSCRIPTION FACTOR IIF, ALPHA SUBUNIT (TFIIF, ALPHA SUBUNIT)	474-501								
PRAB4_HUMAN	RAS-RELATED PROTEIN RAB-4.	38-65								
PRAB6_HUMAN	RAS-RELATED PROTEIN RAB-6.	123-150								
PRADI_HUMAN	RADIXIN.	308-335	414-463	510-537						
PRBB1_HUMAN	RAS-RELATED PROTEIN RAB-11 (24KG) (YL8).	151-178								
PRBB3_HUMAN	RETINOBLASTOMA BINDING PROTEIN 3 (RBBP-3) (PRB-BINDING PROTEIN E2F-1)	129-156	161-223							
PRDP_HUMAN	RD PROTEIN.	9-53								
PRENI_HUMAN	RENIN PRECURSOR, RENAL (EC 3.4.23.15) (ANGIOTENSINOGENASE).	136-163								
PREST_HUMAN	RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170).	190-217	333-370	445-472	571-619	744-771	784-852	1023-1050	1088-1139	1157-1184
		1216-1306								
PRFA1_HUMAN	REPLICATION PROTEIN A 70 KD DNA-BINDING SUBUNIT (RP-A) (RF-A)	208-235	423-455							
PRFP_HUMAN	TRANSFORMING PROTEIN (RFP) (RET FINGER PROTEIN).	183-217								
PRH_HUMAN	BLOOD GROUP RH(D) POLYPEPTIDE	361-388								
PRIB1_HUMAN	RIBOPHORIN I PRECURSOR.	81-108	496-530							
PRIB2_HUMAN	RIBOPHORIN II PRECURSOR.	142-172	361-388							
PRIR1_HUMAN	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE M1 CHAIN (EC 1.17.4.1)	42-69	370-400							
PRL22_HUMAN	60S RIBOSOMAL PROTEIN L22 (EPSTEIN-BARR VIRUS SMALL RNA ASSOCIATED	78-112								
PRL26_HUMAN	60S RIBOSOMAL PROTEIN L26.	55-89	103-137							

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PCGENE	1071178.4 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FRL9_HUMAN	60S RIBOSOMAL PROTEIN L9.	144-192								
FRLA0_HUMAN	60S ACIDIC RIBOSOMAL PROTEIN P0 (L10E).	138-165								
FRO1_HUMAN	52 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	190-235	238-265							
FRO6_HUMAN	60 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	192-245								
FROC_HUMAN	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HNRNP C1 AND HNRNP	16-43								
FROL_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN L (HNRPL).	501-528								
FROU_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN U.	630-657								
FRP81_HUMAN	DNA-DIRECTED RNA POLYMERASE II 215 KD POLYPEPTIDE	269-296	665-720	879-906	1314-1341	1371-1398				
FRP82_HUMAN	DNA-DIRECTED RNA POLYMERASE II 140 KD POLYPEPTIDE	628-667	1008-1035							
FRPD1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 33 KD POLYPEPTIDE	242-274								
FRUXA_HUMAN	RETINOIC ACID RECEPTOR RXR-ALPHA.	318-352								
FRUXB_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 1.	376-403								
FRUXC_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 2	396-423								
FRS12_HUMAN	40S RIBOSOMAL PROTEIN S12.	60-87								
FRS16_HUMAN	40S RIBOSOMAL PROTEIN S16	89-116								
FRS25_HUMAN	40S RIBOSOMAL PROTEIN S25.	26-53								
FRS27_HUMAN	40S RIBOSOMAL PROTEIN S27A.	14-41								
FRS7_HUMAN	40S RIBOSOMAL PROTEIN S7 (S8).	73-100								
FRS9_HUMAN	40S RIBOSOMAL PROTEIN S9	136-161								
FRTC1_HUMAN	RAS-LIKE PROTEIN TC21	123-150								
FRU1A_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A (U1 SNRNP A PROTEIN)	13-47								
FRU2B_HUMAN	U2 SMALL NUCLEAR RIBONUCLEOPROTEIN B"	17-44								
FRYNR_HUMAN	RYANODINE RECEPTOR, SKELETAL MUSCLE	154-188	495-522	866-893	2750-2777	2820-2847	3304-3331	3528-3556	3912-3939	4921-4948
PS10A_HUMAN	S-100 PROTEIN, ALPHA CHAIN	12-54								
PS10B_HUMAN	S-100 PROTEIN, BETA CHAIN	14-56								
PS10D_HUMAN	S-100D PROTEIN.	31-58								
PSAHH_HUMAN	ADENOSYLHOMOCYSTEINASE (EC 3.3.1.1) (S-ADENOSYL-L-HOMOCYSTEINE	389-416								
PSAT1_HUMAN	DNA-BINDING PROTEIN SATB1.	709-736								
PSCCA_HUMAN	SQUAMOUS CELL CARCINOMA ANTIGEN (SCCA) (PROTEIN T4-A)	28-105								
PSCF_HUMAN	STEM CELL FACTOR PRECURSOR (SCF)	74-101								
PSEM1_HUMAN	SEMENOGELIN I PROTEIN PRECURSOR (SGI) (CONTAINS: SEMINAL BASIC	64-98	176-226	288-329	334-368					
PSEM2_HUMAN	SEMENOGELIN II PRECURSOR (SGII).	71-98	183-226	304-335	405-439	539-575				
PSET_HUMAN	SET PROTEIN.	38-65	134-181							
PSG1_HUMAN	SECRETOGRANIN I PRECURSOR (CHROMOGRANIN B)	144-178								
PSG2_HUMAN	SECRETOGRANIN II PRECURSOR (CHROMOGRANIN C)	354-381	290-317	534-561						
PSIAL_HUMAN	BONE SIALOPROTEIN II PRECURSOR (BSP II).	84-113	155-193	236-283						
PSNGL_HUMAN	POSSIBLE GLOBAL TRANSCRIPTION ACTIVATOR SNF2L.	231-258	545-572							
PSNOB_HUMAN	SKI-RELATED ONCOGENE SNON.	414-441								
PSPCA_HUMAN	SPECTRIN ALPHA CHAIN.	193-220	370-621	655-712	1099-1126	1461-1502	1882-1909	1988-2022	2126-2154	2223-2250
		2346-2373								
PSPCB_HUMAN	SPECTRIN BETA CHAIN, ERYTHROCYTE.	150-177	316-350	486-520	648-675	987-1021	1027-1063	1287-1324	1347-1374	1834-1861
PSPRE_HUMAN	SEPIAPTERIN REDUCTASE (EC 1.1.1.153) (SPR).	90-124								
PSRF_HUMAN	SERUM RESPONSE FACTOR (SRF).	77-104	480-507							
PSRPR_HUMAN	SIGNAL RECOGNITION PARTICLE RECEPTOR ALPHA SUBUNIT (SR-ALPHA)	76-110								
PSSR1_HUMAN	SOMATOSTATIN RECEPTOR TYPE 1.	289-316								
PSTH1_HUMAN	STATHMIN (PHOSPHOPROTEIN P19) (ONCOPROTEIN P18) (LEUKEMIA-ASSOCIATED	47-74								
PSUIS_HUMAN	SUCRASE-ISOMALTASE, INTESTINAL (EC 3.2.1.48) / (EC 3.2.1.10)	1748-1775								
PSYB1_HUMAN	SYNAPTOBREVIN 1.	31-67								
PSYD2_HUMAN	ASPARTYL-TRNA SYNTHETASE ALPHA-2 SUBUNIT (EC 6.1.1.12) (ASPARTATE-	44-71								
PSYDP_HUMAN	MULTIFUNCTIONAL AMINOACYL-TRNA SYNTHETASE (CONTAINS: GLUTAMYL-TRN	174-201	740-771							
PSYH_HUMAN	HISTIDYL-TRNA SYNTHETASE (EC 6.1.1.21) (HISTIDINE--TRNA LIGASE).	380-442	468-502							
PSYTI_HUMAN	SYNAPTOTAGMIN I (P65).	148-167	250-277							
PSYTC_HUMAN	THREONYL-TRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE--TRNA	497-524	658-685							
PSYV_HUMAN	VALYL-TRNA SYNTHETASE (EC 6.1.1.9) (VALINE--TRNA LIGASE) (VALRS).	230-257	413-440							
PSYW_HUMAN	TRYPTOPHANYL-TRNA SYNTHETASE (EC 6.1.1.2) (TRYPTOPHAN--TRNA LIGASE)	93-127	196-223							
PT2B_HUMAN	TRANSCRIPTION INITIATION FACTOR IIE-BETA CHAIN (TFIIE-BETA).	34-68								
PTAF_HUMAN	TRANSCRIPTION FACTOR AP-4 (FRAGMENT).	169-196	245-272							

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PCGENE	18?x17?x4 Motif Search on All Human Protein Sequences									
FILE NAME	PROTEIN	AREA1	AREA1	AREA1	AREA1	AREA5	AREA6	AREA7	AREA1	AREA2
PTAP8_HUMAN	TRANSCRIPTION FACTOR JUN-B.	296-323								
PTAPD_HUMAN	TRANSCRIPTION FACTOR JUN-D.	291-313								
PTAU1_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU.	278-305								
PTAU2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU, FETAL.	211-238								
PTCO1_HUMAN	TRANSCOBALAMIN I PRECURSOR.	201-241	330-357							
PTCP1_HUMAN	T-COMPLEX PROTEIN 1 (TCP-1).	316-343								
PTDT_HUMAN	DNA NUCLEOTIDYLEXOTRANSFERASE (EC 2.7.7.31) (TERMINAL ADDITION ENZYME)	61-95								
PTEK_HUMAN	RECEPTOR TYROSINE PROTEIN KINASE TEK PRECURSOR (EC 2.7.1.112) (HPK-6).	(44-67)	969-996	1007-1036						
PTF2B_HUMAN	TRANSCRIPTION INITIATION FACTOR IIB (TFIIB)	135-162								
PTFE1_HUMAN	TRANSCRIPTION FACTOR E1 (FRAGMENT).	43-70	122-149	178-226						
PTFS2_HUMAN	TRANSCRIPTION ELONGATION FACTOR S-II.	29-56								
PTF_HUMAN	TISSUE FACTOR PRECURSOR (TF) (COAGULATION FACTOR III).	148-175								
PTGF1_HUMAN	TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1).	148-185								
PTGF3_HUMAN	TRANSFORMING GROWTH FACTOR BETA 3 PRECURSOR (TGF-BETA 3) ((GLIOMA ASSO	241-270								
PTGFA_HUMAN	TRANSFORMING GROWTH FACTOR ALPHA PRECURSOR (TGF-ALPHA) (EGF-LIKE TGF	87-114								
PTGLK_HUMAN	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE K (EC 2.3.2.13).	258-285								
PTHBS_HUMAN	THROMBOSPONDIN PRECURSOR.	110-163	284-314							
PTHIK_HUMAN	3-KETOACYL-COA THIOLASE PEROXISOMAL PRECURSOR (EC 2.3.1.16) (BETA-	185-212								
PTKNB_HUMAN	PROTACHYKININ BETA PRECURSOR (CONTAINS: SUBSTANCE P, NEUROKININ A	11-38								
PTLE1_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 1.	626-653								
PTLE2_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 2.	94-125								
PTLE4_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 4 (FRAGMENT).	304-331								
PTOPA_HUMAN	DNA TOPOISOMERASE II, ALPHA ISOZYME (EC 5.99.1.3).	19-46	503-532							
PTOPB_HUMAN	DNA TOPOISOMERASE II, BETA ISOZYME (EC 5.99.1.3).	35-65	616-647							
PTPMJ_HUMAN	TROPOMYOSIN, FIBROBLAST ISOFORM TM3.	16-74	82-116							
PTPMA_HUMAN	TROPONYOSIN ALPHA CHAIN, SKELETAL MUSCLE.	16-43	47-74	82-116	147-174	191-237	243-277			
PTPMB_HUMAN	TROPOMYOSIN BETA CHAIN, SKELETAL MUSCLE.	37-116	193-240							
PTPMC_HUMAN	TROPOMYOSIN ALPHA CHAIN, CARDIAC MUSCLE	16-74	82-116	193-277						
PTPMF_HUMAN	TROPOMYOSIN, FIBROBLAST AND EPITHELIAL MUSCLE-TYPE (TM30) (TME1)	37-116	210-240	243-270						
PTPMG_HUMAN	TROPOMYOSIN, FIBROBLAST NON-MUSCLE TYPE (TM30PL).	46-80	111-138	158-199	207-234					
PTPMI_HUMAN	TROPOMYOSIN, CYTOSKELETAL TYPE (TM30NM)	46-80	111-138	172-199						
PTPM3_HUMAN	TROPOMYOSIN ALPHA CHAIN, SMOOTH MUSCLE (FRAGMENT)	25-59	147-178							
PTPP2_HUMAN	TRIPEPTIDYL-PEPTIDASE II (EC 3.4.14.10) (TPP II) (TRIPEPTIDYL	153-187	1004-1031	1160-1187						
PTPR_HUMAN	TPR ONCOGENE (FRAGMENT).	82-147								
PTRJ6_HUMAN	TREB36 PROTEIN.	18-45	242-269							
PTRFR_HUMAN	THYROTROPIN-RELEASING HORMONE RECEPTOR (TRH-R) (THYROLIBERIN	349-383								
PTRJC_HUMAN	TROPONIN I, CARDIAC MUSCLE.	36-63								
PTRKA_HUMAN	HIGH AFFINITY NERVE GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112)	66-93	117-148							
PTRSR_HUMAN	TRANSFERRIN RECEPTOR PROTEIN (TR) (ANTIGEN CD71) (TP)	188-215	366-393							
PTSHR_HUMAN	THYROTROPIN RECEPTOR PRECURSOR (TSH-R).	87-117	420-447							
PTTK_HUMAN	PROTEIN KINASE TYK (EC 2.7.1.-).	170-197	324-359	510-544	549-583					
PTYK2_HUMAN	NON-RECEPTOR TYROSINE-PROTEIN KINASE TYK2 (EC 2.7.1.112)	130-177								
PUBA1_HUMAN	UBIQUITIN-ACTIVATING ENZYME E1 (A1S9 PROTEIN)	448-475								
PUBF1_HUMAN	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1)	227-254								
PUDP0_HUMAN	UDP-GLUCURONOSYLTRANSFERASE PRECURSOR, MICROSOMAL (EC 2.4.1.17)	227-254								
PUFO_HUMAN	RECEPTOR TYROSINE-PROTEIN KINASE UFO PRECURSOR (EC 2.7.1.112)	488-522								
PUSF1_HUMAN	UPSTREAM STIMULATORY FACTOR 1.	251-295								
PVATC_HUMAN	VACUOLAR ATP SYNTHASE SUBUNIT C (EC 3.6.1.34) (V-ATPASE C SUBUNIT)	47-74	117-147							
PVIL1_HUMAN	VILLIN.	338-372	427-461	717-744						
PVIME_HUMAN	VIMENTIN.	119-146	233-260							
PVINC_HUMAN	VINCULIN.	108-135								
PVPRT_HUMAN	RETROVIRUS-RELATED PROTEASE (EC 3.4.23.-).	95-134								
PWEE1_HUMAN	WEE1-LIKE PROTEIN KINASE (EC 2.7.1.112)	354-388								
PWT1_HUMAN	WILMS' TUMOR PROTEIN (WT33).	247-274								
PXBP1_HUMAN	X BOX BINDING PROTEIN-1 (XBP-1) (TREB5 PROTEIN).	97-135								
PXPAC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-A CELLS (XERODERMA PIGMENTOSUM	180-211								
PXPCC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM	134-168	701-728							

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GENE	107:178:1 Motif Search on All Human Protein Sequences										
I.E.NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM	284-291									
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM	83-110	715-766	1047-1081							
XPCC_HUMAN	DNA-REPAIR PROTEIN XPCC1.	23-57									
XPCC_HUMAN	DNA-REPAIR PROTEIN XPCC1.	29-56									
ZN10_HUMAN	ZINC FINGER PROTEIN 10 (ZINC FINGER PROTEIN KOX1) (FRAGMENT).	17-62	307-334	1071-1098	1404-1500	2013-2057	2146-2180				
ZN40_HUMAN	ZINC FINGER PROTEIN 40 (HUMAN IMMUNODEFICIENCY VIRUS TYPE I ENHANCER-										
ZN45_HUMAN	ZINC FINGER PROTEIN 45 (BAC1744) (FRAGMENT).	3-30	201-228								
ZN46_HUMAN	ZINC FINGER PROTEIN 46 (ZINC FINGER PROTEIN KUP).	121-149									

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TABLE X

Search Results Summary for PCTLZIP, P1CTLZIP, and P2CTLZIP Motifs

PCTLZIP		P1CTLZIP					P2CTLZIP		
LIBRARY FILE		LIBRARY FILE					LIBRARY FILE		
PENV_FOAMV	401-480	PENV_BIV06	434-460				PENV_BIV06	628-642	
PENV_HV1MA	439-483	PENV_BIV27	463-478				PENV_BIV27	664-671	
PENV_HV1MF	183-198	PENV_FOAMV	481-498	864-880			PENV_FENV1	30-47	630-647
PENV_HV1RH	446-460	PENV_HV1KB	762-788				PENV_FIVP5	781-798	
PENV_HV18C	186-201	PENV_HV1MA	437-463				PENV_FIV8D	778-798	
PENV_HV122	123-138	PENV_HV1MF	183-198				PENV_FIVT2	780-797	
PENV_HV12H	438-463	PENV_HV1RH	444-460				PENV_FLVC6	38-58	624-641
PENV_HV2BE	760-785	PENV_HV181	738-764				PENV_FLVGL	606-622	
PENV_HV2D1	741-760	PENV_HV18C	186-201				PENV_FLVLB	626-642	
PENV_HV2Q1	741-760	PENV_HV122	123-138				PENV_FLV8A	602-618	
PENV_HV2N2	742-767	PENV_HV123	117-133				PENV_FOAMV	710-727	867-874
PENV_HV2RO	761-786	PENV_HV12H	437-463				PENV_FBVGA	626-642	
PENV_HV2S8	743-760	PENV_HV2BE	760-786				PENV_FBVGB	606-622	
PENV_HV2ST	746-760	PENV_HV2D1	741-760				PENV_FBV8M	608-626	
PENV_JSRV	104-119	PENV_HV2Q1	741-760				PENV_HV1OY	123-140	
PENV_MMTV8	618-633	PENV_HV2N2	742-767				PENV_HV1Z2	410-427	
PENV_MMTVG	618-633	PENV_HV2RO	761-786				PENV_HV123	164-171	
PENV_BIVMK	138-164	PENV_HV2S8	743-768				PENV_HV2CA	760-787	
PENV_BIVML	138-164	PENV_HV2ST	746-760				PENV_MCFF	600-617	
PHEMA_CVBLY	391-408	PENV_J8RV	104-119	641-557			PENV_MCFF3	601-618	
PHEMA_CVBM	391-408	PENV_MCFF	397-413				PENV_MLVAV	630-647	
PHEMA_CVBQ	391-408	PENV_MCFF3	397-413				PENV_MLVC8	625-642	
PHEMA_CVHOC	391-408	PENV_MLVAV	427-443				PENV_MLVF6	639-656	
PHEMA_CVMA6	402-417	PENV_MLVC8	422-438				PENV_MLVFF	639-656	
PHEMA_CVMS	403-418	PENV_MLVHO	423-439				PENV_MLVFP	639-656	
PHEMA_INBAA	286-310	PENV_MLVMO	420-442				PENV_MLVHO	626-643	
PHEMA_INBBE	303-318	PENV_MLVRD	424-440				PENV_MLVKI	167-184	
PHEMA_INBBO	283-308	PENV_MLVRK	424-440				PENV_MLVMO	629-646	
PHEMA_INBEN	301-316	PENV_MMTVB	618-633				PENV_MLVRD	624-641	
PHEMA_INBFU	286-301	PENV_MMTVG	618-633				PENV_MLVRK	624-641	
PHEMA_INBGL	286-311	PENV_BFV1	864-880				PENV_M8VFB	170-187	
PHEMA_INBHK	283-308	PENV_BFV3L	861-877				PENV_RMCFV	603-620	
PHEMA_INBIB	286-303	PENV_BIVGB	93-109				PENV_BFV1	710-727	867-874
PHEMA_INBID	286-314	PENV_BIVMK	138-164	802-810			PENV_BFV3L	707-724	864-871
PHEMA_INBLE	302-317	PENV_BIVML	138-164	801-817			PENV_BIVM1	786-783	
PHEMA_INBMD	282-307	PENV_BIV84	806-822				PENV_BIVMK	785-782	
PHEMA_INBME	286-311	PENV_BIV8P	810-826				PENV_BIVML	784-781	
PHEMA_INBNA	286-303	PHEMA_CDVO	30-52				PENV_BIV84	786-786	
PHEMA_INBOR	301-316	PHEMA_CVBLY	391-408				PENV_BIV8P	773-790	
PHEMA_INBSI	201-316	PHEMA_CVBM	391-408				PENV_BMAVH	630-653	
PHEMA_INBSJ	286-313	PHEMA_CVBQ	391-408				PENV_BM9AV	42-59	
PHEMA_INBUB	284-309	PHEMA_CVHOC	391-408				PHEMA_CDVO	36-53	200-217
PHEMA_INBVI	286-311	PHEMA_CVMA6	402-417				PHEMA_CVBLY	391-408	
PHEMA_INBVK	303-318	PHEMA_CVMS	403-418				PHEMA_CVBM	391-408	
PHEMA_INBYB	286-301	PHEMA_IAAIC	237-253				PHEMA_CVBQ	391-408	

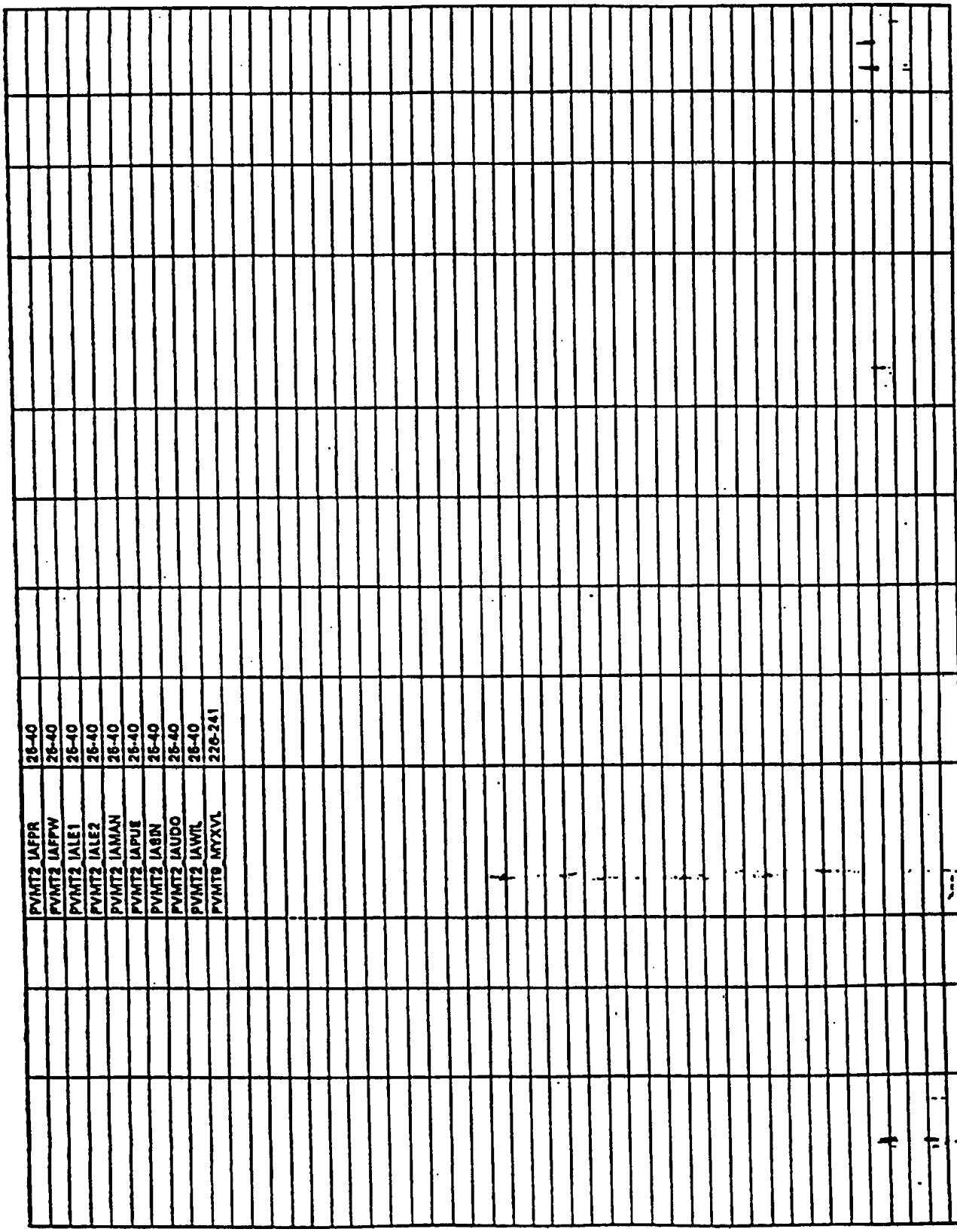
PHEMA_MUMPM	133-148		PHEMA_IABAN	221-237				PHEMA_CVHOC	391-408		
PHEMA_MUMPR	133-148		PHEMA_IABUD	234-250				PHEMA_IAAIC	322-339		
PHEMA_MUMPS	133-148		PHEMA_IACKA	234-250				PHEMA_IABAN	306-323		
PHEMA_PI1HW	346-360		PHEMA_IACKG	231-247				PHEMA_IABUD	320-337		
PHEMA_PI2H	65-80		PHEMA_IACKV	230-246				PHEMA_IACKA	320-337		
PHEMA_PI2HT	65-80		PHEMA_IADA1	234-250				PHEMA_IACKG	316-333		
PHEMA_RINDK	366-383		PHEMA_IADA3	237-253				PHEMA_IACKP	302-319		
PHEMA_SV5	7-94		PHEMA_IADCZ	234-250				PHEMA_IACKQ	302-319		
PHEMA_SV5CM	7-94		PHEMA_IADH1	221-237				PHEMA_IACKS	319-336		
PHEMA_SV5CP	7-94		PHEMA_IADH2	221-237				PHEMA_IACKV	315-332		
PHEMA_SV5LN	7-94		PHEMA_IADH3	221-237				PHEMA_IADA1	320-337		
PVENV_DHVI1	42-57		PHEMA_IADH4	221-237				PHEMA_IADA3	322-339		
PVFP7_CAPVK	89-104		PHEMA_IADH5	221-237				PHEMA_IADCZ	320-337		
PVFU5_VACC5	72-87		PHEMA_IADH6	221-237				PHEMA_IADH1	306-323		
PVG01_BPP22	242-257		PHEMA_IADH7	221-237				PHEMA_IADH2	306-323		
PVG01_HSVEB	169-184		PHEMA_IADM2	237-253				PHEMA_IADH3	306-323		
PVG01_HSVI1	210-225	317-332	PHEMA_IADNZ	234-250				PHEMA_IADH4	306-323		
PVG06_BPT4	184-199		PHEMA_IAEN5	221-237				PHEMA_IADH5	306-323		
PVG07_BPT4	886-900		PHEMA_IAEN7	237-253				PHEMA_IADH7	306-323		
PVG08_HSVI1	134-149		PHEMA_IAFPR	230-246				PHEMA_IADM2	322-339		
PVG10_BPPH2	183-198		PHEMA_IAHAL	236-252				PHEMA_IADNZ	320-337		
PVG10_BPPZA	183-198		PHEMA_IAHAR	235-251				PHEMA_IADU3	322-339		
PVG10_HSV8A	109-124		PHEMA_IAHC5	230-246				PHEMA_IAEN5	306-323		
PVG16_BPP1	81-96		PHEMA_IAHC7	230-246				PHEMA_IAEN7	322-339		
PVG16_BPT4	468-483		PHEMA_IAHCD	230-246				PHEMA_IAFPR	315-332		
PVG25_BPT4	97-112		PHEMA_IAHDE	230-246				PHEMA_IAGRE	320-337		
PVG29_HSVI1	20-35		PHEMA_IAHFO	236-252				PHEMA_IAGU2	320-337		
PVG30_BPPH5	11-94		PHEMA_IAHK5	236-252				PHEMA_IAGUA	319-336		
PVG36_BPOX2	22-37		PHEMA_IAHK7	236-252				PHEMA_IAHAL	321-338		
PVG36_HSV8A	108-123		PHEMA_IAHLE	230-246				PHEMA_IAHC5	315-332		
PVG37_BPT2	1253-1268		PHEMA_IAHLO	230-246				PHEMA_IAHC7	315-332		
PVG37_HSVI1	284-299		PHEMA_IAHMI	236-252				PHEMA_IAHCD	315-332		
PVG55_HSVI1	22-37	143-158	PHEMA_IAHNM	236-252				PHEMA_IAHDE	315-332		
PVG56_HSVI1	268-283		PHEMA_IAHRO	236-252				PHEMA_IAHFO	321-336		
PVG58_HSVI1	102-117		PHEMA_IAHSA	236-252				PHEMA_IAHK5	321-336		
PVG59_HSVI1	267-282		PHEMA_IAHSP	230-246				PHEMA_IAHK7	321-338		
PVG65_HSVI1	518-533		PHEMA_IAHSW	230-246				PHEMA_IAHLE	315-332		
PVG9_BPPH2	234-249		PHEMA_IAHTE	236-252				PHEMA_IAHLO	315-332		
PVG9_BPPZA	234-249		PHEMA_IAHTO	236-252				PHEMA_IAHMI	321-336		
PVG9_BPV1R	57-72		PHEMA_IAHUR	236-252				PHEMA_IAHNM	321-336		
PVGF_BPPHX	234-249		PHEMA_IAKIE	235-251				PHEMA_IAHNN	315-332		
PVGL2_CVBF	264-279		PHEMA_IALEN	235-251				PHEMA_IAHPR	315-332		
PVGL2_CVBL9	264-279		PHEMA_IAMAA	233-249				PHEMA_IAHRO	321-338		
PVGL2_CVBLY	264-279		PHEMA_IAMAB	238-254				PHEMA_IAHSA	321-338		
PVGL2_CVBM	264-279		PHEMA_IAMAO	237-253				PHEMA_IAHSP	315-332		
PVGL2_CVBQ	264-279		PHEMA_IAME1	237-253				PHEMA_IAHSW	315-332		
PVGL2_CVBV	264-279		PHEMA_IAME2	237-253				PHEMA_IAHTE	321-338		

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PVMT2_IALE1	26-40		PHEMA_PI3B	324-340				PHEMA_SV41	85-102		
PVMT2_IALE2	26-40		PHEMA_PI3H4	324-340				PHEMA_SV5	84-101		
PVMT2_IAMAN	26-40		PHEMA_PI3HA	324-340				PHEMA_SV5CM	84-101		
PVMT2_IAPUE	26-40		PHEMA_PI3HT	324-340				PHEMA_SV5CP	84-101		
PVMT2_IASIN	26-40		PHEMA_PI3HU	324-340				PHEMA_SV5LN	84-101		
PVMT2_IAUDO	26-40		PHEMA_PI3HV	324-340				PVF05_VACCC	280-297		
PVMT2_IAWIL	26-40		PHEMA_PI3HW	324-340				PVF05_VACCP	280-297		
PVMT9_MYXVL	226-241		PHEMA_PI3HX	324-340				PVF05_VACCV	281-298		
			PHEMA_RINDK	368-383				PVF09_VACCC	176-193		
			PHEMA_SV5	7-94				PVF09_VACCV	176-193		
			PHEMA_SV5CM	7-94				PVG27_HSV8A	209-226		
			PHEMA_SV5CP	7-94				PVG28_HSV11	173-190		
			PHEMA_SV5LN	7-94				PVG39_HSV11	648-665		
			PVENV_OHV11	42-57				PVG43_HSV11	109-126	621-638	
			PVENV_EAV	25-41				PVG67_HSV11	171-188		
			PVFP2_FOWPV	88-104				PVG72_HSV11	1252-1269		
			PVFP7_CAPVK	89-104				PVGF1_IBVB	3073-3090		
			PVFU6_VACC6	72-87				PVGL2_IBV6	1094-1111		
			PVG01_HSVEB	169-184				PVGLB_HSVE1	736-753		
			PVG01_HSV11	209-225	317-332			PVGLB_HSVE4	675-692		
			PVG08_HSV11	134-149				PVGLB_HSVEA	736-753		
			PVG10_HSVBA	109-124				PVGLB_HSVEB	736-753		
			PVG11_HSV11	103-119				PVGLB_HSVEL	736-753		
			PVG12_HSV11	270-286				PVGLB_ILTV6	597-614		
			PVG1_SPV1R	76-92				PVGLB_ILTV8	607-624		
			PVG29_HSV11	20-35				PVGLB_ILTVT	607-624		
			PVG33_SPOX2	22-37				PVGLC_PRVIF	190-197		
			PVG36_HSVBA	108-123				PVGLE_VZVD	469-486		
			PVG37_HSV11	284-299				PVGLF_SV5	401-418		
			PVG41_HSV11	244-260				PVGLH_HCMVA	365-382		
			PVG46_HSV11	1244-1260				PVGLH_HCMVT	364-381		
			PVG55_HSV11	22-37	143-158			PVGLH_HSV11	245-262	803-820	
			PVG56_HSV11	266-283				PVGLH_HSV1E	245-262	803-820	
			PVG58_HSV11	101-117				PVGLI_HSV11	43-60		
			PVG59_HSVSA	130-146	330-346			PVGLM_BUNL7	81-98		
			PVG69_HSV11	267-282				PVGLM_BUNSH	81-98		
			PVG85_HSV11	362-378	618-633			PVGLM_PUUMH	712-729		
			PVG71_HSVBA	89-105				PVGLM_PUUMS	712-729		
			PVG9_SPPH2	234-249				PVGLM_RVFV	344-361		
			PVG9_SPPZA	234-249				PVGLM_RVFVZ	344-361		
			PVG9_SPV1R	57-72				PVGLY_LA98G	12-94		
			PVGF1_IBVB	2210-2226				PVGLY_LA98J	12-94		
			PVGL2_CVBF	123-139	174-190	264-279		PVGLY_LYCVA	12-94		
			PVGL2_CVBL9	123-139	174-190	264-279		PVGLY_LYCVW	12-94		
			PVGL2_CVBLY	123-139	174-190	264-279		PVGLY_MOPEI	12-94		
			PVGL2_CVBM	123-139	174-190	264-279		PVM1_REOVD	280-297		
			PVGL2_CVBQ	31-47	123-139	174-190	264-279	PVM1_REOVL	280-297		

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PVMT2_IAFPR	26-40
PVMT2_IAFPW	26-40
PVMT2_IALE1	26-40
PVMT2_IALE2	26-40
PVMT2_IAMAN	26-40
PVMT2_IAPUE	26-40
PVMT2_IABN	26-40
PVMT2_IAUDO	26-40
PVMT2_IAWTL	26-40
PVMT9_MYXVL	226-241

TABLE XI

Search Results Summary for P3CTLZIP, P4CTLZIP, P5CTLZIP, and P6CTLZIP Motifs

P3CTLZIP			P4CTLZIP			P5CTLZIP			P6CTLZIP			
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			
PENV_BIV27	147-166		PENV1_FRSFV	380-399		PENV1_FRSFV	380-400		PENV_BIV06	47-66	626-646	
PENV_CAEVC	810-828		PENV_AVI6U	98-117		PENV2_FRSFV	380-400		PENV_BIV27	47-66	147-166	564-575
PENV_CAEVG	808-826		PENV_BIV27	147-166		PENV_BAEVM	170-190		PENV_FENV1	226-246	630-651	
PENV_HV2B6	750-768		PENV_HV1ZH	123-142		PENV_FIVPE	781-801		PENV_FLVC6	624-645		
PENV_HV2D1	741-759		PENV_HV2D2	9-29		PENV_FIVSD	779-799		PENV_FLVQL	447-466	606-626	
PENV_HV2Q1	741-759		PENV_HV2S8	778-797		PENV_FIVT2	780-800		PENV_FLVLB	467-486	625-646	
PENV_HV2NZ	742-760		PENV_JSRV	541-560		PENV_FLVQL	9-29		PENV_FLV9A	444-465	602-623	
PENV_HV2RO	751-769		PENV_RSVP	533-552		PENV_FOAMV	255-275	924-944	PENV_FOAMV	153-174	957-978	
PENV_HV2S8	743-761		PHEMA_VACCC	173-192		PENV_F9VQA	9-29		PENV_F9VQA	467-486	625-646	
PENV_HV2ST	746-763		PHEMA_VACCI	173-192		PENV_HV1C4	428-448		PENV_F6VQB	447-466	605-626	
PENV_JSRV	378-394		PHEMA_VACCT	173-192		PENV_HV2CA	750-770		PENV_F9V9M	450-471	608-629	
PHEMA_PI2H	118-136		PHEMA_VACCV	173-192		PENV_MLVF5	400-420		PENV_F6V8T	467-486		
PHEMA_PI2HT	118-136		PVENV_BEV	62-81		PENV_MMTVB	643-663		PENV_GALV	52-73	619-640	
PHEMA_SV41	56-73		PVENV_MCV1	61-80		PENV_MMTVG	643-663		PENV_HV2BE	760-771		
PVENV_THOGV	473-491		PVENV_MCV2	61-80		PENV_OMVV9	76-96		PENV_HV2Q1	741-762		
PVG16_BPP22	83-101		PVFUS_ORFNZ	29-48		PENV_RSVP	42-62		PENV_HV2NZ	742-763		
PVG24_BPT4	116-133		PVG01_H9VEB	169-188		PENV_SFV1	924-944		PENV_HV2RO	751-772		
PVG36_H6V8A	344-362		PVG01_VACCC	376-395		PENV_SFV3L	921-941		PENV_HV2ST	746-766		
PVG40_H9VI1	14-32		PVG01_VACCV	315-334		PENV_SIVM1	766-786		PENV_MCFF	600-621		
PVG50_H6V8A	5-24		PVG01_VARV	376-395		PENV_SIVMK	765-785		PENV_MCFF3	601-622		
PVG51_BPT4	63-81		PVG06_BPT4	627-646		PENV_SIVML	764-784		PENV_MLVAV	630-651		
PVG51_H6VI1	84-102		PVG10_H6VI1	35-54		PENV_SIV84	769-789		PENV_MLVCB	625-646		
PVG66_H9VI1	155-173		PVG11_H9VI1	103-122	160-189	PENV_SIV8P	773-793		PENV_MLVF5	639-660		
PVGF1_IBV8	2788-2806	3374-3392	PVG1_BPPH2	31-50		PHEMA_CDVO	493-513		PENV_MLVFF	639-660		
PVGL2_CVH22	1053-1071		PVG1_BPV1R	659-678		PHEMA_CVBLY	391-411		PENV_MLVFP	639-660		
PVGL2_IBV6	1056-1074		PVG20_BPT4	231-250		PHEMA_CVBM	391-411		PENV_MLVHO	626-647		
PVGL2_IBVB	1055-1073		PVG32_VZVD	90-109		PHEMA_CVBQ	391-411		PENV_MLVKI	167-188		
PVGL2_IBVD2	1056-1074		PVG36_BPK3	132-151		PHEMA_CVHOC	391-411		PENV_MLVMO	629-650		
PVGL2_IBVK	1055-1073		PVG37_BPT2	19-38	620-648	PHEMA_CVMA5	402-422		PENV_MLVRD	624-645		
PVGL2_IBVM	1055-1073		PVG37_BPT4	19-38	626-644	PHEMA_IACKQ	81-101		PENV_MLVRK	624-645		
PVGL8_H9VB1	660-678	689-707	PVG39_H9VI1	1038-1057		PHEMA_IADMA	81-101		PENV_M9VFB	170-191		
PVGL8_H6VBC	692-710		PVG41_H9VI1	62-81		PHEMA_MUMPM	397-417		PENV_RMCFV	603-624		
PVGL8_H9V8A	684-702		PVG43_BPPF3	380-399		PHEMA_MUMPR	397-417		PENV_SFV1	957-978		
PVGL8_ILTV6	740-758		PVG46_BPPF1	337-356		PHEMA_MUMPS	397-417		PENV_SFV3L	157-178	954-976	
PVGL8_ILTV8	750-768		PVG50_H9VI1	142-161		PHEMA_PHODV	493-513		PENV_SIVA1	437-458		
PVGL8_ILTVT	750-768		PVG61_H9VI1	117-136		PHEMA_PI1HW	322-342		PENV_SIVAQ	442-463		
PVGLC_VZVD	431-449		PVG67_H9VI1	318-337	1072-1091	PHEMA_PI2H	13-33		PENV_SIVAI	421-442		
PVGLC_VZVS	431-449		PVGF1_IBVB	1687-1606	2108-2127	PHEMA_PI2HT	13-33		PENV_SIVAT	435-456		
PVGLF_PI3H4	2-24		PVGL2_CVBF	991-1010		PHEMA_RINDL	497-517		PENV_SM9AV	42-63		
PVGLH_H6V6G	314-332		PVGL2_CVBL9	991-1010		PHEMA_SENDS	322-342		PHEMA_CVMA5	402-423		
PVGLH_H6VE4	814-832		PVGL2_CVBLY	991-1010		PHEMA_SENDF	322-342		PHEMA_IADE1	266-287		
PVGLH_H6VE8	807-825		PVGL2_CVBM	991-1010		PHEMA_SENDH	322-342		PHEMA_MUMPM	225-246		
PVGLI_H9V11	5-24		PVGL2_CVBQ	991-1010		PHEMA_SENDJ	322-342		PHEMA_MUMPR	225-246		
PVGNM_BPMV	678-696		PVGL2_CVBV	991-1010		PHEMA_SENDZ	322-342		PHEMA_MUMPS	225-246		
PVM01_VACCC	134-152	177-196	PVGL2_CVH22	766-787	1116-1134	PVENV_LELV	27-47	146-166	PHEMA_PHODV	213-234		

PVM01_VACCV	83-101	128-144	PVGL2_CVM4	999-1018		PVENV_THOOV	356-376		PHEMA_PI2H	13-34		
PVM1_REOVD	227-246		PVGL2_CVMA5	947-966		PVG01_VACCC	298-318		PHEMA_PI2HT	13-34		
PVM1_REOVL	227-246		PVGL2_CVMJH	858-877		PVG01_VACCV	237-257		PHEMA_SV5	7-26	378-400	
PVMAT_HR5VA	44-62		PVGL2_CVPF5	64-83	1038-1057	PVG01_VARV	298-318		PHEMA_SV5CM	7-26	378-400	
PVMAT_NDVA	190-208		PVGL2_CVPPU	64-83	1038-1056	PVG06_VACCC	31-51		PHEMA_SV5CP	7-26	378-400	
PVMAT_NDVB	190-208		PVGL2_CVPR5	814-833		PVG06_VARV	31-51		PHEMA_SV5LN	7-26	378-400	
PVMP_CAMVC	183-201		PVGL2_CVPRM	814-833		PVG09_SPPF1	26-46		PVG01_H3VE5	169-190		
PVMP_CAMVD	183-201		PVGL2_FIPV	1041-1060		PVG12_H3VI1	161-171		PVG01_H5VI1	589-610		
PVMP_CAMVE	183-201		PVGL2_IBV5	586-607	771-790	PVG22_H3VI1	300-320		PVG23_H3VI1	314-335		
PVMP_CAMVN	183-201		PVGL2_IBV8	587-606	770-789	PVG39_H3VI1	648-668	970-990	PVG37_SPOX2	65-86		
PVMP_CAMV3	183-201		PVGL2_IBVD2	586-607	771-790	PVG51_H3VI1	29-49		PVG43_H3VI1	167-178		
PVMP_CAMVW	183-201		PVGL2_IBVK	587-606	770-789	PVG63_H3VI1	336-356		PVG55_H3VI1	288-309		
PVMP_FMVD	180-198		PVGL2_IBVM	587-606	770-789	PVG65_H3VI1	117-137		PVG55_H3V8A	85-106		
			PVGL8_HCMVA	706-725		PVG74_H5V3A	124-144		PVG58_H5VI1	1165-1176		
			PVGL8_HCMVT	707-726		PVGL2_IBV6	325-348		PVG58_H3V8A	286-287		
			PVGL8_H3V6U	117-136		PVGL2_IBV8	327-347		PVG60_H3VI1	30-51		
			PVGL8_ILTV6	266-276		PVGL2_IBVD2	328-348		PVG63_H3VI1	238-259		
			PVGL8_ILTV3	266-285		PVGL2_IBVD3	328-348		PVGF1_IBV8	1866-1877		
			PVGL8_ILTVT	266-285		PVGL2_IBVK	327-347		PVGH3_HCMVA	167-178		
			PVGLC_H5V11	3-24	467-486	PVGL2_IBVM	327-347	378-398	PVGL2_CVBF	1269-1280		
			PVGLC_H3V1K	3-24	467-486	PVGL2_IBVU2	310-330		PVGL2_CVBL6	1269-1280		
			PVGLC_H3VBC	475-494		PVGL8_EBV	732-752		PVGL2_CVBLY	1269-1280		
			PVGLG_CHAV	436-455		PVGL8_HCMVA	750-770		PVGL2_CVBM	1269-1280		
			PVGLG_RABVH	372-391		PVGL8_HCMVT	751-771		PVGL2_CVBQ	1269-1280		
			PVGLI_H3VE5	44-63		PVGL8_H3V23	79-99		PVGL2_CVBV	1269-1280		
			PVGLI_VZVD	278-297		PVGL8_H8V2H	79-99		PVGL2_CVM4	1317-1338		
			PVGLM_3UNGE	117-136		PVGL8_H3V29	65-86		PVGL2_CVMA5	1265-1286		
			PVGLM_PHV	152-171		PVGL8_H8V6U	72-92		PVGL2_CVMJH	1176-1197		
			PVGLM_PTPV	997-1016		PVGL8_H3VB2	279-299		PVGL8_H8V11	83-104		
			PVGLM_PUUMH	155-174		PVGL8_H8VBA	63-83		PVGL8_H5V1F	82-103		
			PVGLM_PUUM3	155-174		PVGL8_MCMV8	738-758		PVGL8_H8V1K	82-103		
			PVGLM_RVFV	830-849		PVGLF_PI3H4	283-303		PVGL8_H8V1P	83-104		
			PVGLM_RVFV2	830-849		PVGLG_RABVE	454-474		PVGL8_MCMV3	135-155		
			PVGLM_UUK	655-674		PVGLG_RABVH	454-474		PVGLC_PRVIF	446-467		
			PVGLY_LYCVW	89-108		PVGLG_RABVP	454-474		PVGLF_CDVO	336-357		
			PVQN8_CPMV	1105-1104		PVGLG_RABV8	454-474		PVGLF_M5A5E	224-245		
			PVM03_REOVD	521-540		PVGLG_RABVT	454-474		PVGLF_MEA6I	227-246		
			PVME1_CVBM	171-190		PVGLH_MCMV8	670-690		PVGLF_M5A3Y	224-245		
			PVME1_CVH22	136-155		PVGLM_3UNL7	1325-1345		PVGLF_MUMPM	446-467		
			PVME1_CVPF8	174-193		PVGLM_3UN8H	1325-1345		PVGLF_MUMPR	446-467		
			PVME1_CVPPU	174-193		PVGLM_3UNYW	998-1018		PVGLF_MUMP3	446-467		
			PVME1_CVPRM	174-193		PVGLM_HANT8	999-1019		PVGLF_PHODV	305-326		
			PVME1_CVTKE	171-190		PVGLM_HANTH	1000-1020		PVGLF_PI1HC	456-477		
						PVGLM_HANTL	1001-1021		PVGLF_PI2H	450-471		
						PVGLM_HANTV	1001-1021		PVGLF_PI2HG	450-471		
						PVGLM_RVFV2	1158-1178		PVGLF_PI2HT	450-471		
						PVGLM_3EOUR	1000-1020		PVGLF_PI3B	405-426	453-474	

						PVGLM SEQU3	999-1018		PVGLF PI3H4	453-474		
						PVGLM UUK	926-945		PVGLF RINDK	220-241		
						PVGLY LYCVA	12-32		PVGLF RINDL	220-241		
						PVGLY LYCVW	12-32		PVGLF SEND5	460-481		
						PVGLY PIARV	12-32		PVGLF SENDF	460-481		
						PVGNB CPMV	141-161		PVGLF SENDH	460-481		
						PVMAT MUMP3	310-330		PVGLF SENDJ	460-481		
						PVMAT NDVA	309-329		PVGLF SENDZ	460-481		
						PVMAT NDVB	309-329		PVGLF SV41	453-474		
						PVMAT PI2HT	308-328		PVGLF SV5	446-467		
						PVMAT PI4HA	312-332		PVGLH HCMVA	691-712		
						PVMAT PI4HB	312-332		PVGLH HCMVT	690-711		
						PVMAT SV41	306-326		PVGLH H3VE4	304-325		
						PVMAT SV5	306-326		PVGLH H3VE5	297-318		
						PVME1 IBV3	74-94		PVGLH H3V3A	658-679		
						PVME1 IBVB	74-94		PVGLI H3V2	2-23		
						PVME1 IBVB2	74-94		PVGLI H3V23	2-23		
						PVME1 IBVK	74-94		PVGLM BUNGE	197-218		
						PVMSA HPBD3	201-221		PVGLM BUNL7	190-211		
						PVMSA HPBQ5	209-229		PVGLM BUNSH	190-211		
						PVM3A HPBHE	293-313		PVGLM BUNYW	193-214		
						PVM3A WHV1	207-227		PVGLY LA66Q	237-258		
						PVM3A WHV59	212-232		PVGLY LA66J	238-259		
						PVM3A WHV7	212-232		PVGP3 EBV	67-88		
						PVM3A WHV8	212-232		PVM01 VACCC	281-302		
						PVM3A WHV8I	212-232		PVM01 VACCV	230-251		
						PVM3A WHVW3	63-83		PVMAT HR3VA	169-190		
									PVMAT RINDK	200-221	239-260	
									PVMAT TRTV	122-143		
									PVME1 CVHOC	64-85		
									PVM3A HPBD3	201-222		
									PVM3A HPBV0	70-91		
									PVM3A HPBV2	244-265		
									PVM3A HPBV4	244-265		
									PVM3A HPBV9	244-265		
									PVM3A HPBVA	233-254		
									PVM3A HPBVD	70-91		
									PVM3A HPBVI	233-254		
									PVM3A HPBVJ	233-254		
									PVM3A HPBVL	233-254		
									PVM3A HPBVN	70-91		
									PVM3A HPBVO	233-254		
									PVM3A HPBVP	244-265		
									PVM3A HPBVR	244-265		
									PVM3A HPBV3	70-91"		
									PVM3A HPBVW	233-254		
									PVM3A HPBVY	233-254		

BAD ORIGINAL

PVM3A_HPBV2	233-264
PVMT2_IAANN	26-40
PVMT2_IABAN	26-40
PVMT2_IAFOW	26-40
PVMT2_IAFPR	26-40
PVMT2_IAFPW	26-40
PVMT2_IALE1	26-40
PVMT2_IALE2	26-40
PVMT2_IAMAN	26-40
PVMT2_IAPUE	26-40
PVMT2_IABIN	26-40
PVMT2_IAUDO	26-40
PVMT2_IAWIL	26-40

TABLE XII

Search Results Summary for P7CTLZIP, P8CTLZIP, and P9CTLZIP Motifs

P7CTLZIP			P8CTLZIP			P9CTLZIP					
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE					
PENV_8AEVM	202-224		PENV1_FR9FV	380-403		PENV_BLVAF	303-327				
PENV_HV1B1	498-520		PENV2_FR6FV	380-403		PENV_BLVAU	303-327				
PENV_HV1B6	493-515		PENV_BIV06	178-201		PENV_BLVAV	303-327				
PENV_HV1BN	494-516		PENV_BIV27	207-230		PENV_BLVB2	303-327				
PENV_HV1BR	503-525		PENV_FOAMV	804-887		PENV_BLVB6	303-327				
PENV_HV1EL	496-517		PENV_HV1Z3	176-198		PENV_BLVJ	303-327				
PENV_HV1H2	498-520		PENV_HV2BE	3-26	781-804	PENV_FIVPE	781-805				
PENV_HV1H3	498-520		PENV_HV2CA	750-773		PENV_FIVSD	778-803				
PENV_HV1J3	510-532		PENV_HV2D1	3-26	772-795	PENV_FIVT2	780-804				
PENV_HV1JR	490-512		PENV_HV2Q1	772-795		PHEMA_CVBLY	391-415				
PENV_HV1K8	504-526		PENV_HV2NZ	777-800		PHEMA_CVBM	391-415				
PENV_HV1MA	500-522		PENV_J8RV	641-664		PHEMA_CVBQ	391-415				
PENV_HV1MF	496-518		PENV_8FV1	864-887		PHEMA_CVHOC	391-415				
PENV_HV1ND	488-510		PENV_8FV3L	861-884		PHEMA_INCCA	442-466				
PENV_HV1PV	498-520		PENV_8IVM1	803-826		PHEMA_INCEN	430-454				
PENV_HV1S1	489-511		PENV_8IVMK	802-825		PHEMA_INCGL	430-454				
PENV_HV1Z2	123-145	496-517	PENV_8IVML	801-824		PHEMA_INCHY	429-453				
PENV_HV1Z6	497-519		PENV_8IV84	806-829		PHEMA_INCJH	443-467				
PENV_HV1Z8	506-527		PENV_8IV8P	810-833		PHEMA_INCKY	429-453				
PENV_HV1ZH	498-520		PHEMA_CDVQ	200-223		PHEMA_INCMI	429-453				
PENV_J8RV	376-398		PHEMA_PI2H	65-88		PHEMA_INCNA	429-453				
PENV_MPMV	213-235		PHEMA_PI2HT	65-88		PHEMA_INCP1	430-454				
PENV_8RV1	213-235		PVF11_VACCC	161-184		PHEMA_INCP2	430-454				
PHEMA_IAAIC	37-59		PVF15_VACCC	25-48		PHEMA_INCP3	430-454				
PHEMA_IABAN	21-43		PVF15_VACCP	3-26		PHEMA_INCTA	430-454				
PHEMA_IADA3	37-59		PVG1L_AMEPV	313-336		PHEMA_INCYA	430-454				
PHEMA_IADH2	21-43		PVG28_H8VI1	491-514		PHEMA_MUMPM	101-125				
PHEMA_IADH3	21-43		PVG43_H8VI1	322-345		PHEMA_MUMPR	101-125				
PHEMA_IADH4	21-43		PVG52_H9VI1	229-252		PHEMA_MUMP9	101-125				
PHEMA_IADH5	21-43		PVG67_H8VI1	722-745		PHEMA_PI1HW	29-53				
PHEMA_IADH6	21-43		PVGL2_CVBF	10-33		PVENV_BEV	62-86				
PHEMA_IADH7	21-43		PVGL2_CVBL9	651-674		PVF05_VACCC	280-304				
PHEMA_IADM2	37-59		PVGL2_CVBLY	10-33		PVF05_VACCP	280-304				
PHEMA_IADMA	28-50		PVGL2_CVM4	1267-1290		PVF05_VACCV	281-305				
PHEMA_IADU3	37-59		PVGL2_CVMA5	1215-1238		PVF09_VACCC	176-200				
PHEMA_IAEN6	21-43		PVGL2_CVMJH	1126-1149		PVF09_VACCV	176-200				
PHEMA_IAEN7	37-59		PVGL2_CVPF8	1274-1297		PVG01_VZVD	58-82				
PHEMA_IAMA0	37-59		PVGL2_CVPPU	1272-1295		PVG10_H8V8A	356-379				
PHEMA_IAME1	37-59		PVGL2_CVPR8	1050-1073		PVG12_H8V9A	68-92				
PHEMA_IAME2	37-59		PVGL2_CVPRM	1050-1073		PVG19_H8VI1	88-112				
PHEMA_IAME6	21-43		PVGL2_FIPV	1277-1300		PVG28_H9VI1	173-197				
PHEMA_IANT6	37-59		PVGL2_I8V8	196-219		PVG43_H8VI1	109-133				
PHEMA_IAQU7	21-43		PVGL2_I8V8	195-218		PVG67_H8VI1	108-132	1006-1029			
PHEMA_IATKM	33-55		PVGL2_I8VD2	196-219		PVG72_H8VI1	720-744				
PHEMA_IAUDO	37-59		PVGL2_I8VD3	196-219		PVGF1_I8V8	3601-3626				

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PVGLH_H8VE4	614-638										
PVGLH_H8VEB	607-629										
PVGLI_HCMVA	156-180										
PVGLM_PTPV	743-765										
PVGLP_BEV	430-452	1546-1568									
PVGLY_LA88G	426-448										
PVGLY_LA98J	427-449										
PVGLY_MOPEI	426-447										
PVGP2_EBV	657-679										
PVGP3_EBV	654-676										
PVM1_REOVD	414-436										
PVM1_REOVL	414-436										
PVM3_REOVD	304-326										
PVMAT_PI1HC	195-217										
PVMAT_PI2HT	132-154										
PVMAT_8ENDF	195-217										
PVMAT_8ENDH	195-217										
PVMAT_8ENDZ	195-217										
PVMAT_8V41	132-154										
PVMEM_EBV	131-153										
PVMP_CERV	293-315										

TABLE XIII

SEARCH RESULTS SUMMARY FOR P12LZIPC MOTIF

PCGENE	PIRCTLIP	All Viruses (No Bacteriophages)								
TLE_NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA1	AREA2	AREA3
P1MK_TRVSY	POTENTIAL 74 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	360-378	461-478	600-619	641-661	1011-1030	1299-1323	1185-1409	
P1BIIS_VACCC	38ETA-HSD	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-56	397-331						
P1BIIS_VACCV	38ETA-HSD	VACCINIA VIRUS (STRAIN WR)	41-56	397-331						
P1BIIS_VARV	38ETA-HSD	VARIOLA VIRUS	41-56	397-331						
PATI1_FOWPV	ANKYRIN-THROMBOXIN-LIKE HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438MUNICH)	41-56							
PATI1_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	47-69							
PATI1_VARV	61 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	187-410							
PATI2_HSV11	UL46	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	388-411							
PATI2_HSV1F	UL46	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	370-393							
PATI2_VACCC	ALPHA TRANS-INDUCING FACTOR 82 KD PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	179-195							
PATI2_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	197-222							
PATI2_VZVD	ALPHA TRANS-INDUCING FACTOR 74 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-241							
PATI_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	61-79	333-393						
PATN_HSVE4	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8 2)	47-71							
PATN_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	101-130	337-393						
PATN_VZVD	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-133							
PATT_COWPX	A-TYPE INCLUSION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	178-198							
PB2_BBV	B2 PROTEIN	COWPOX VIRUS	203-230							
PBOI_HSVBO	TRANSCRIPTIONAL REGULATORY PROTEIN	BLACK BEETLE VIRUS	306-412	1102-1128						
PBOM_EBV	DCRI PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	31-52							
PBRL1_EBV	TRANSCRIPTION ACTIVATOR BRLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	35-78							
PCAJB1_VACCC	CELL SURFACE BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95 8)	96-123							
PCAJB1_VACCV	CELL SURFACE BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	16-32	200-224						
PCAJB1_VARV	CELL SURFACE BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	188-203							
PCOPI_HSVSA	COMPL CONTROL PROTEIN HOMOLOG PREC	VARIOLA VIRUS	188-203							
PCELJ_HSV11	CELL FUSION PROTEIN PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	176-198							
PCELJ_HSV1K	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	178-196	212-238	286-309					
PCELJ_HSV2H	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	178-196	212-238						
PCELJ_HSVEB	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	178-196	212-238	285-309					
PCELJ_VZVD	CELL FUSION PROTEIN PRECURSOR	HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	201-223	240-268						
PCOND_HSVSA	CYCLIN HOMOLOG	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	246-269							
PCOAT_BFDV	COAT PROTEIN VP1	HERPESVIRUS SAIMIRI (STRAIN 11)	33-61	216-242						
PCOAT_POVBA	COAT PROTEIN VP1	BUDGERIGAR FLEDGLING DISEASE VIRUS	91-110							
PCOAT_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK (STRAIN AS)	25-52	97-123	233-251					
PCOAT_POVBO	COAT PROTEIN VP1	POLYOMAVIRUS BK	25-52	97-123	233-251					
PCOAT_POVHA	COAT PROTEIN VP1	BOVINE POLYOMAVIRUS	96-120							
PCOAT_POVJC	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	16-43							
PCOAT_POVLY	COAT PROTEIN VP1	POLYOMAVIRUS JC	17-44	89-115	225-241					
PCOAT_POVMK	COAT PROTEIN VP1	LYMPHOTROPIC POLYOMAVIRUS	97-123							
PCOAT_SV40	COAT PROTEIN VP1	MOUSE POLYOMAVIRUS (STRAIN KILLIAM)	142-160	231-249						
PCOAT_TTV1	COAT PROTEIN VP1	SIMIAN VIRUS 40	27-44	99-115	225-243					
PCOAJ_POVBO	COAT PROTEIN TP1	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	80-103							
PCOAJ_POVLY	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	77-104							
PCOAJ_POVMO	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	78-102							
PCOAJ_TTV1	COAT PROTEIN TP3	MOUSE POLYOMAVIRUS (STRAIN 1)	205-226							
PCOAT_ABMYW	COAT PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	33-55							
PCOAT_BOLV	COAT PROTEIN PRECURSOR	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	148-171							
PCOAT_CIVP1	MAJOR CAPSID PROTEIN	BOOLARRA VIRUS	383-401							
PCOAT_CLVK	COAT PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	364-387	392-409						
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	165-188							
PCOAT_CMVSI	COAT PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	165-188							
PCOAT_CMV	COAT PROTEIN	CYTOMEGALOVIRUS (STRAIN SINGAPORE)	58-76							
PCOAT_CSMV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	19-42							
PCOAT_CTV36	COAT PROTEIN	CITRUS STUNTE MOSAIC VIRUS	219-238							
PCOAT_FCVCA	COAT PROTEIN	CITRUS TRISTEZA VIRUS (ISOLATE T36)	73-94							
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	544-567	643-664						
		FELINE CALICIVIRUS (STRAIN JAPANESE F4)	544-567	643-657						

BAD ORIGINAL

PCGENE	P1CTCLZIP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCOAT_FCV19	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	567.590	641-660							
PCOAT_FPV	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS	690.703								
PCOAT_FPV19	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS (STRAIN 19)	690.703								
PCOAT_IEVS	COAT PROTEIN	ICELENTUM VIRUS S	47-66								
PCOAT_MEVA	COAT PROTEIN VP1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	685.700								
PCOAT_MNSV	COAT PROTEIN	MELON NECROTIC SPOT VIRUS	17-33								
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	176-197	204-227							
PCOAT_NMV	COAT PROTEIN	NARCISSUS MOSAIC VIRUS	61-86								
PCOAT_NODAV	COAT PROTEIN PRECURSOR	NODAMURA VIRUS	176-194								
PCOAT_OBSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	104-130								
PCOAT_OYMV	COAT PROTEIN	ONONIS YELLOW MOSAIC VIRUS	35-52								
PCOAT_PAVC1	COAT PROTEIN VP1	CANINE PARVOVIRUS (TYPE 2 / STRAIN A72)	547.562								
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN 780929)	685.700								
PCOAT_PAVCD	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN CPV.D CORNELL 120)	700.715								
PCOAT_PAVCN	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN N)	711.726								
PCOAT_PEMV	COAT PROTEIN PRECURSOR	PEPPER MOTTLE VIRUS	231.285								
PCOAT_PMV	COAT PROTEIN	PAPAYA MOSAIC POTEXVIRUS	85-103								
PCOAT_PNWS	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	64-84	101-119							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	139-147								
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	128-152								
PCOAT_SMWLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	51-67								
PCOAT_SMYEA	COAT PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	37-72								
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	223-237								
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN BS-1)	139-183								
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	73-89								
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	134-177								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	101-128								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	102-128								
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN 06)	102-128								
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAIJILEMENSE)	102-128								
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	102-128								
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN HOLMES RIBGRASS (HR))	102-128								
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O)	102-128								
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	102-128								
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO1)	102-128								
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	119-142								
PCOAT_TNVD	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D)	108-134								
PCOL_HSV5C	COLLAGEN-LIKE PROTEIN	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	71-96								
PCORA_HPBV1	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADW2)	79-100								
PCORA_HPBVA	CORE ANTIGEN	HEPATITIS B VIRUS (STRAIN ALPHA1)	15-31								
PCORA_HPBVZ	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADYW)	79-100								
PDNBI_ADE02	PROBABLE DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	71-93								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	649-673								
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	881-788								
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	459-476	597-620							
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	459-476	597-620							
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	459-476	597-620							
PDNBI_HSV2I	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BA1V)	459-472	596-616							
PDNBI_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP)	810-831								
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	108-127	610-629	869-887	974-1000					
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	637-654								
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	188-212	641-670							
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	269-294								
PDPOL_ADE01	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 1	264-281	828-850							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	264-283	828-850							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	331-350	894-917	984-916						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	262-281	562-581	876-898						

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2	AREA 6	AREA 7	AREA 8	AREA 9
PDPOL_CBEPV	DNA POLYMERASE	CHIRISTONEURA BIENNIS ENTOMOPOXVIRUS	410-454	654-678	733-757						
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	424-442								
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	155-172	424-442							
PDPOL_EBV	DNA POLYMERASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	354-374	438-463	524-542	667-687	973-990				
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	60-77	220-247							
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	569-587	945-960	1029-1053						
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 55)	4-29	157-174	522-541	554-572					
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	4-29	157-174	521-540	553-571					
PDPOL_HPBDU	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	181-200	213-231							
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE 511)	4-29	157-174	522-541	554-572					
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	448-475								
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	4-29	554-572							
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW2)	412-439	447-463	761-780						
PDPOL_HPBV4	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR4)	410-417								
PDPOL_HPBV9	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 911)	412-439	447-463	761-780						
PDPOL_HPBVA	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN ALPHA1)	80-96	399-426	434-450	750-769					
PDPOL_HPBVI	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	80-96	410-437	445-468	761-778					
PDPOL_HPBVJ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	80-96	410-437	445-468	761-778					
PDPOL_HPBVL	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE)	80-96	399-426	434-457	750-767					
PDPOL_HPBVM	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR / MUTANT)	80-96	410-437	761-777						
PDPOL_HPBVO	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN ORINAWA/PIDW282)	80-96	410-437	445-468	761-778					
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PIDW294)	412-439	447-463							
PDPOL_HPBVR	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR)	80-96	410-437	761-778						
PDPOL_HPBVW	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW)	82-98	405-432	440-456						
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	80-96	399-426	434-457	750-767					
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	80-96	399-426	434-457						
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	797-817	877-897	1073-1090						
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	797-817	877-897	1073-1090						
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	797-817	877-897	1073-1090						
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	797-817	877-897	1073-1090						
PDPOL_HSV2I	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	802-822	882-902	1078-1095						
PDPOL_HSV6U	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	652-672	786-803	858-882						
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	283-299	377-392	454-477	798-818	878-898				
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	257-275	397-418							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	118-137	297-319	344-364	514-532	955-972				
PDPOL_MCMVS	DNA POLYMERASE	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	303-322	535-553	780 802						
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	518-536	676-697							
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	421-437								
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-331	363-382	440-463	713-740	757-781	1006-1024			
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	446-473								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	451-478								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	451-478								
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	450-477	554-571							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	451-478								
PDPOL_WHVW6	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW523)	123-150								
PDPOM_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	399-426	434-450	750-767						
PDUT_HCMVA	DUTPASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-126								
PDUT_HSVE4	DUTPASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	130-154								
PDUT_HSVEB	DUTPASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	130-149								
PDUT_HSVI1	DUTPASE	ICTALURID HERPESVIRUS 1	72-95								
PDUT_HSVSA	DUTPASE	HERPESVIRUS SAIMIRI (STRAIN 11)	22-45	79-104	168-181						
PE1I1_ADEM1	EARLY E1A 11 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	24-47								
PE1A6_ADE07	EARLY E1A 6.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	8-35								
PE1A_ADE04	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 4	104-120								
PE1A_ADE07	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	8-35								
PE1A_ADES7	EARLY E1A 28 KD PROTEIN	SIMIAN ADENOVIRUS TYPE 7	173-189	238-254							
PE1BL_ADE12	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	451-467								

PCGENE	P1:CTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PE1BL_ADEC2	E1B PROTEIN, LARGE T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	101-122								
PE1BL_ADENT	EARLY E1B 44 KD PROTEIN	TUPAIA ADENOVIRUS	75-101								
PE1BS_ADEC2	E1B PROTEIN, SMALL T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	55-77								
PE1BS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	118-138								
PE3I0_ADE02	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 2	3-21	34-60							
PE3I0_ADE05	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	3-21	33-60							
PE3I0_ADE07	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	3-24								
PE3I1_ADE02	EARLY E3A 11 6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 2	27-51								
PE3I1_ADE03	EARLY E3 9 0 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	19-45								
PE3I1_ADE05	EARLY E3A 10 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	20-46								
PE3I1_ADE07	EARLY E3 7 7 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	36-62								
PE3I4_ADE05	EARLY E3 14 5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	108-135								
PE3I5_ADE03	EARLY E3B 14 5 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	52-72								
PE3I5_ADE07	EARLY E3B 14 9 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	52-72								
PE3I6_ADE03	EARLY E3 16 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	102-125								
PE3I1_ADE03	EARLY E3 20 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	146-167								
PE3I1_ADE07	EARLY E3 20 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 7	146-167								
PE3I2_ADEC1	EARLY E3 22 2 KD GLYCOPROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	153-177								
PE3GL_ADEM1	EARLY E3 17 7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	105-127								
PE4I1_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	56-77								
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	56-77								
PE433_ADEM1	PROBABLE EARLY E4 33 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	61-80								
PE434_ADE02	EARLY E4 34 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	80-106								
PEAD_EBV	EARLY ANTIGEN PROTEIN D	EPSTEIN-BARR VIRUS (STRAIN B95-8)	263-286								
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-184								
PEBN2_EBV	EBNA-2 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	126-141								
PEBN3_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	113-131	662-681							
PEFTI_VARV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	21-41								
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV_AVIRJ	ENV POLYPROTEIN	AVIAN RETROVIRUS RPL30	206-225								
PENV_AVISU	COAT PROTEIN GP37	AVIAN SARCOMA VIRUS (STRAIN URJ)	98-117								
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	170-190	202-224							
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	47-68	178-201	434-450	525-546					
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	47-68	147-168	207-230	463-479	554-575				
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	303-327								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	303-327								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	303-327								
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	303-327								
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB39)	303-327								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	303-327								
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	630-651						
PENV_FIVP8	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	630-651						
PENV_FLVC6	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	38-55	624-645							
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	9-29	447-468	605-626						
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	467-488	625-646							
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	444-465	602-623							
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	153-174	255-275	300-325	481-496	710-727	864-887	924-951	957-978	
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	467-488	625-646							
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	447-468	605-626							
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	450-471	608-629							
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	467-488								
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	519-540								
PENV_HVIB1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	498-520								
PENV_HVIB8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	493-515								
PENV_HVIBN	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	494-516								
PENV_HVIBR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	503-525								

PGENE	PJECTLIP	All Viruses (No Bacteriophage)								
FILENAME	ZAOTHR	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PENV_HVIC4	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE [illegible])	498 498								
PENV_HVIEL	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	495.517								
PENV_HVIH2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	498.520								
PENV_HVIH3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	498.520								
PENV_HVIJI	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB ISOLATE)	510.533								
PENV_HVIJR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	498.512								
PENV_HVIKB	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1/GP12)	504.526	592.599							
PENV_HVIMA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	500.522								
PENV_HVIN5	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NIH A ISOLATE)	498.518								
PENV_HVIND	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	178.201								
PENV_HVIOY	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	498.510								
PENV_HVIPV	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	123.140								
PENV_HVIRH	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	498.520								
PENV_HVIS1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU/LAI ISOLATE)	445.460								
PENV_HVIS3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	488.511	738.754							
PENV_HVIZ3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	500.522								
PENV_HVIZ3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	123.145	410.427	495.517						
PENV_HVIZ6	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	117.113	175.198							
PENV_HVIZ6	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	497.519								
PENV_HVIZB	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	505.527								
PENV_HVZBE	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE IBZ211 ISOLATE)	123.143	438.453	498.520						
PENV_HV2CA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	3.26	750.775	781.804						
PENV_HV2D1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	750.777								
PENV_HV2D2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	3.26	741.766	772.795						
PENV_HV2D1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9.28								
PENV_HV2N2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	741.766	772.795							
PENV_HV2K0	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	742.767	777.800							
PENV_HV2S8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	731.716								
PENV_HV2ST	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	741.768	778.804							
PENV_ISAV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	745.770								
PENV_MCF7J	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	104.119	299.333	176.398	141.364					
PENV_MCF7J	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	600.631								
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	661.622								
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	630.631								
PENV_MLVF1	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	623.646								
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	619.660								
PENV_MLVFR	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-211)	619.660								
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOWARD MURINE LEUKEMIA VIRUS (NFS-1/KOR-TULANUS VIRUS)	619.660								
PENV_MLVKJ	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	626.647								
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	167.188								
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	629.650								
PENV_MLVRK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	624.645								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	624.645								
PENV_MMTVG	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	641.661								
PENV_MSVFB	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	641.661								
PENV_ONVVS	ENV POLYPROTEIN PRECURSOR	FBJ MURINE OSTEOSARCOMA VIRUS	213.235								
PENV_OMCFV	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	170.191								
PENV_RSVP	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	658.681								
PENV_SFVI	ENV POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	660.674								
PENV_SFVJL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	42.69	533.552							
PENV_SIVAI	GP160 PRECURSOR	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK1)	100.123	710.737	864.887	924.931	957.978				
PENV_SIVAG	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	137.178	704.739	707.724	861.884	921.948	954.975			
PENV_SIVAJ	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	417.458								
PENV_SIVAT	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	442.483								
PENV_SIVGB	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	421.442								
		SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GH1)	435.456								
			91.109								

BAD ORIGINAL

PCGENE	FUNCTION	AB Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
FILE NAME	PROTEIN	VIRUS										
PENV_SIVMI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MNE143-83 ISOLATE)	766-791	801-816								
PENV_SIVMK	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	119-154	763-791	801-815							
PENV_SIVML	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	119-154	764-791	801-814							
PENV_SIV34	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PTROSAN14 ISOLATE)	769-788	806-829								
PENV_SIVSP	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBJMAC11 ISOLATE)	773-793	810-833								
PENV_SMSAV	PTSE PROTEIN	SIMIAN SARCOMA VIRUS	42-63									
PENV_SIVI	ENV POLYPROTEIN	SIMIAN RETROVIRUS SAV-1	211-235									
PEBA_AVEB	EBNA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	227-249									
PETF1_FOWPI	EARLY TRANSCRIPTION FACTOR	FOWLPOX VIRUS (STRAIN FP-1)	21-41	71-92								
PETF1_SPVKA	EARLY TRANSCRIPTION FACTOR	SHOPE FIBROMA VIRUS (STRAIN KASZA)	21-41									
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-41									
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN WR)	21-41									
PETF3_VACCC	EARLY TRANSCRIPTION FACTOR 83 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	50-73	101-117	165-187	285-308	538-562					
PETF3_VACCV	EARLY TRANSCRIPTION FACTOR 83 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	48-72									
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	50-73	101-117	165-187	285-308	538-562					
PEXON_HSV11	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	165-180									
PEXON_HSV2	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 2)	155-170									
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABOF)	276-291									
PEXON_PRVN1	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	36-51									
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMBAS)	38-44	213-264								
PFIB1_ADE40	41 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	116-133									
PFIB1_ADE41	41 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	116-133									
PFIBP_ADE05	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 5	132-173									
PFIBP_ADE07	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 7	447-473									
PFIBP_ADEBO	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3 (NASTADENOVIRUS BOS1)	347-372	775-801								
PFIBP_ADECI	FIBER PROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	282-309									
PFIBP_ADEMU	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	191-215	227-252	691-717	748-774	979-1004					
PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	53-78									
PGAG_AVEV3	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	2-27									
PGAG_AVMAC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	53-78									
PGAG_AVMMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MH1	53-78									
PGAG_AVSSU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	53-78									
PGAG_AVSY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	53-78									
PGAG_BAEVM	GAG POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	397-422									
PGAG_BLVAU	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	212-238									
PGAG_BLVJ	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	213-239									
PGAG_CAEVC	GAG POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	102-119									
PGAG_FUSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	53-78									
PGAG_HTL1A	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	77-94									
PGAG_HTL1C	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	77-94									
PGAG_HTL1M	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	77-94									
PGAG_HVIAJ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV/SF2 ISOLATE)	65-91									
PGAG_HVIBI	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	65-91									
PGAG_HVIBS	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH5 ISOLATE)	65-91									
PGAG_HVIBR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	65-91									
PGAG_HVICA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	65-91									
PGAG_HVIEL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	65-91									
PGAG_HVIH2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	65-91									
PGAG_HVIJ3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JH3 ISOLATE)	65-91									
PGAG_HVIJR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	65-91									
PGAG_HVIMA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	262-285									
PGAG_HVINH2N	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NH2N ISOLATE)	65-91									
PGAG_HVINY5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	65-91									
PGAG_HVINYO	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	65-91	132-173								
PGAG_HVIOY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	65-91									
PGAG_HVIPV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	65-91									
PGAG_HVIRH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RF/HAT ISOLATE)	65-91									

BAD ORIGINAL

PCGENE	P12CTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PGAG_HV1U4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISO	65-91								
PGAG_HV1W3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	65-91								
PGAG_HV123	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	65-91								
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	757-772								
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN HRA)	82-97								
PGAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	82-97								
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	82-97								
PGAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	53-78								
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	618-645								
PGAG_SFVI	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	85-101								
PGAG_SFVJL	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3)	85-101								
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	189-213								
PGAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1 ISOLATE)	193-217								
PGAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	189-213								
PGAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	66-92								
PGAG_SIVGB	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	66-92								
PGAG_SIVMI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)									
PGAG_SMRVH	GAG POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	286-307								
PGLRX_VACCC	POSSIBLE GLUTAREDOXIN	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	71-87								
PGLRX_VARV	POSSIBLE GLUTAREDOXIN	VARIOLA VIRUS	71-87								
PGRAN_GVAS	GRANULIN	AGROTIS SEGETUM GRANULOSIS VIRUS	208-226								
PGRAN_GVTN	GRANULIN	TRICHOPLUSIA NI GRANULOSIS VIRUS	209-227								
PGRFA_VACCC	GROWTH FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-124								
PGRFA_VACCV	GROWTH FACTOR	VACCINIA VIRUS (STRAIN WR)	104-123								
PGRFA_VARV	GROWTH FACTOR	VARIOLA VIRUS	104-122								
PHELI_EBV	PROBABLE HELICASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	180-207	338-361	438-464						
PHELI_HCMVA	PROBABLE HELICASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	397-420	539-560	826-852						
PHELI_HSV1I	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	389-408	628-646							
PHELI_HSV2H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	290-309	529-554							
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	681-704	243-266	394-413						
PHELI_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN II)	327-350	389-411	658-683						
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	165-189	383-402	561-578	761-786					
PHEMA_CDVO	HEMAGGLUTININ-NEURAMINIDASE	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	36-53	200-223							
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	391-415								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	391-415								
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	391-415								
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC), AND (STRAIN L9)	391-415								
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	391-415								
PHEMA_CVMA5	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	402-423								
PHEMA_CVMS	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN S)	407-418								
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	37-59	322-339							
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	21-43	306-323							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	320-337								
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	320-337								
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	81-101	231-247	316-333						
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	302-319								
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/83)	302-319								
PHEMA_IACKS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	319-336								
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	230-246	315-332							
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	320-337								
PHEMA_IADAJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	37-59	322-339							
PHEMA_IADC2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	320-337								
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	266-287	319-336							
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	306-323								
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	21-43	306-323							
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/13/80)	21-43	306-323							
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	21-43	306-323							

PCGENE	FUNCTION	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	21-43	215-337						
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/83)	21-43	306-333						
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/83)	21-43	306-333						
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	17-59	322-339						
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	26-50	81-101						
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	320-337							
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	17-59	322-339						
PHEMA_IAEN6	HEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/1869)	21-43	306-333						
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/2/1977)	17-59	322-339						
PHEMA_IAFR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	330-346	315-332						
PHEMA_IAGR1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	330-337							
PHEMA_IAGU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GUILLAMARYLAND/704/77)	320-337							
PHEMA_IAGU4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/2/78)	319-336							
PHEMA_IAHA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGER/3/72)	331-348							
PHEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	330-346	315-332						
PHEMA_IAHK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/77)	330-346	315-332						
PHEMA_IAHK2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	330-346	315-332						
PHEMA_IAHM1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	330-346	315-332						
PHEMA_IAHL6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/86)	330-346	315-332						
PHEMA_IAHL1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KINGTON/1/66)	330-346	315-332						
PHEMA_IAHL2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/1963)	330-346	315-332						
PHEMA_IAHM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	330-346	315-332						
PHEMA_IAHN4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/76)	330-346	315-332						
PHEMA_IAHN1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	315-332							
PHEMA_IAHP1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	330-346	315-332						
PHEMA_IAHR0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/1/60)	330-346	315-332						
PHEMA_IAHS1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	330-346	315-332						
PHEMA_IAHS2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	330-346	315-332						
PHEMA_IAHS4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/1972)	330-346	315-332						
PHEMA_IAHT8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	330-346	315-332						
PHEMA_IAHT0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/1/91)	330-346	315-332						
PHEMA_IAHU6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	330-346	315-332						
PHEMA_IAJA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	317-334							
PHEMA_IAMA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	197-213	319-336						
PHEMA_IAMA8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	307-328	324-341						
PHEMA_IAMA0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	17-59	322-339						
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	17-59	322-339						
PHEMA_IAME3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	17-59	322-339						
PHEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	21-43	306-333						
PHEMA_IAMN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	85-101	231-247	116-133					
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	17-59	322-339						
PHEMA_IAPL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/MAINE/2/84)	320-337							
PHEMA_IAQU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QU/7/70)	21-43	306-333						
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/1/1)	320-337							
PHEMA_IASE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/1982)	320-337							
PHEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	334-350	321-338						
PHEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/31/56/81)	330-346	315-332						
PHEMA_IATK1M	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1/80)	33-55	326-337						
PHEMA_IATK1O	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	333-349							
PHEMA_IATK1R	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	330-346							
PHEMA_IATK1W	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	329-345							
PHEMA_IAUD0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	33-59	322-339	180-197					
PHEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/1/75)	38-60	333-350						
PHEMA_IAXC1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN K/1)	17-59	322-339						
PHEMA_IAZC0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	17-59	322-339						

BEST AVAILABLE COPY

PCGENE	FILETYP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA1	AREA2	AREA1	AREA2	AREA1	AREA2	AREA1	AREA2
PIEMA_IAZHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	21-43	306-321								
PIEMA_IAZIJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/116/82)	21-43	306-321								
PIEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/ARKEU/1/84)	17-39	322-339								
PIEMA_INBAA	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/86)	115-131	291-310								
PIEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OEJIING/1/81)	123-139	301-318								
PIEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/84)	116-132	291-308								
PIEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	123-139	291-308								
PIEMA_INBFU	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/FUKUOKA/8/81)	101-116	301-316								
PIEMA_INBGL	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/GL/54)	108-124	284-301								
PIEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/73)	119-135	296-311								
PIEMA_INBIB	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/BARIRAK/12/85)	116-132	291-308								
PIEMA_INBID	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ID/76)	108-124	284-301								
PIEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	120-136	299-314								
PIEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	123-139	302-317								
PIEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	123-139	292-307								
PIEMA_INBNA	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/NAGASAKI/1/87)	116-132	296-311								
PIEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	108-124	288-303								
PIEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	123-139	301-316								
PIEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	119-135	298-313								
PIEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	116-132	294-309								
PIEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/87)	116-132	296-311								
PIEMA_INBYB	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/16/88)	123-139	303-318								
PIEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	108-124	286-301								
PIEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	442-466									
PIEMA_INCOL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	430-454									
PIEMA_INCHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HIYOGO/1/81)	439-455									
PIEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	442-467									
PIEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/81)	439-455									
PIEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	439-455									
PIEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NARA/2)	439-455									
PIEMA_INCOI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	430-454									
PIEMA_INCPJ	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	430-454									
PIEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	430-454									
PIEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	430-454									
PIEMA_MDAOI	HEMAGGLUTININ-NEURAMINIDASE	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	430-454									
PIEMA_MDMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1)	101-123	133-148	223-246	367-394	397-417					
PIEMA_MDMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	101-123	133-148	223-246	367-394	397-417					
PIEMA_MDMPS	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	101-123	133-148	223-246	367-394	397-417					
PIEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	101-123	133-148								
PIEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	93-110									
PIEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	93-110									
PIEMA_NDVI4	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	93-110									
PIEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	93-110									
PIEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	93-110									
PIEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MYADERA/51)	93-110									
PIEMA_NDVTO	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	93-110									
PIEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B/48)	93-110									
PIEMA_PIODV	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	93-110									
PIEMA_PIIIW	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	16-38	111-134	493-513							
PIEMA_PIIH	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	29-51	122-142	143-160	486-503						
PIEMA_PIIHT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (PIV-2)	17-40	65-88	118-136							
PIEMA_PIIS	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	17-40	65-88	118-136							
PIEMA_PIIH	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	111-128	172-189	224-240							
PIEMA_PIIHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NH1 47885)	111-128	172-189	224-240							
PIEMA_PIIHT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/12493/74)	111-128	172-189	224-240							
PIEMA_PIIIT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/13/60)	111-128	172-189	224-240							

BAD ORIGINAL

PCGENE	PIRTLIP	All Viruses (No Bacteriophage*)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PIEMA_PIRU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEXAS/83)	111-128	272-299	324-340					
PIEMA_PIIV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12637/83)	111-128	272-299	324-340					
PIEMA_PIIW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/664/79)	111-128	272-299	324-340					
PIEMA_PIIX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/5911/73)	111-128	272-299	324-340					
PIEMA_PIHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	110-127	272-299	324-340					
PIEMA_RDNDK	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KABETE O)	106-333							
PIEMA_RDNDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	4-30							
PIEMA_SENDS	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN 7 / HOST MUTANTS)	122-142							
PIEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	122-142							
PIEMA_SENDI	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	122-142							
PIEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	122-342							
PIEMA_SVI	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	122-342							
PIEMA_SVJ	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN WJ)	55-75	85-102	107-112					
PIEMA_SVSCM	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CPI-)	7-28	84-101	179-400					
PIEMA_SVKP	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/LACH-)	7-28	84-101	179-400					
PIEMA_SVSLN	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/LACH-)	7-28	84-101	179-400					
PIEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-28	84-101	179-400					
PIEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	173-192							
PIEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	173-192							
PIEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	173-192							
PIEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	173-192							
PIEXH_ADE01	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 1	175-194							
PIEXH_ADE03	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	38-61	119-140						
PIEXH_ADE05	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	27-48							
PIEXH_ADE41	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 41	38-61	119-140						
PIEXH_ADEM1	HEXON-ASSOCIATED PROTEIN PRECURSOR	MOUSE ADENOVIRUS TYPE 1	38-61	138-146						
PIEXO_ADE01	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 1, AND 3	16-33							
PIEXO_ADEC1	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	92-117							
PIEXO_ADENT	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	52-77							
PIHO_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	60-82							
PIH7_ASFB7	LATE PROTEIN H17L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	517-533	558-581	609-626					
PIH8_ASFB1	LATE PROTEIN H18L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	68-83							
PIJ5_ASFB1	LATE PROTEIN J126R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	169-190							
PIJ9_ASFB1	LATE PROTEIN J139L PRECURSOR	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	60-77							
PIP7_ASFB1	EARLY PROTEIN P78R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	238-260							
PIMA_SOCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	2-29							
PIC11_EBV	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	93-119							
PIC11_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-123	131-153	230-247					
PIC11_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	136-176	207-227						
PIC11_HSVIA	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	8-29	45-61	122-143	151-168				
PIC11_HSVIF	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	8-29	45-61	122-143	151-168				
PIC11_HSVI2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BA1V)	8-29	122-143	146-163					
PIC11_HSVEB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EQUINE HERPESVIRUS TYPE 1	12-37	130-151						
PIC11_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	37-56	116-144	722-755					
PIC11_MCMV3	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	27-49	51-70	647-673					
PIC11_PRVB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	126-144	202-219	386-411					
PIC11_VZVD	PROBABLE PROCESSING AND TRANSPORT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	285-307	698-718						
PIC11_VZVO	IMMEDIATE-EARLY PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	69-88	819-839	733-744					
PIC11_HSV2H	VMW110 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	668-684							
PIC12_PRVB	EARLY PROTEIN 6	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	713-729							
PIC12_HSV1F	INFECTED CELL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	82-102							
PIC14_HSV11	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	211-227							
PIC14_HSVEB	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	81-98	611-617						
PIC14_HSVEK	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	708-725	736-759						
PIC14_HSVMO	TRANS-ACTING TRANSACTIVATOR PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	708-725	736-759						
PIC14_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	488-506	585-611	1202-1218					
			547-563							

BAD ORIGINAL

PCGENE	FUNCTION	All Viruses (No Bacteriophage)									
FULLNAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PIE10_PRVIF	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN INDIANA-YUNKER / BECKER)	331-748								
PIE10_PRVKA	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN KAPLAN)	330-737								
PIE1_HCMVA	TRANSCRIPTIONAL REGULATOR IE81 HOMOLOG (	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	284-304	164-181							
PIE1_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	178-194								
PIE1_HSV2H	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	178-194								
PIE1_HSVED	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG (	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	177-193	164-181							
PIE1_HSVSA	57 KD IMMEDIATE-EARLY PHOSPHOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	161-176								
PIE4_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-205								
PIE4_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4	81-104								
PIE4_PRVKA	IMMEDIATE-EARLY PROTEIN	EQUINE HERPESVIRUS TYPE 1	93-116								
PIE4_VZVD	GENE 63/70 PROTEIN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	85-108								
PIK1F_HCMVA	HYPOTHETICAL PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	51-78								
PKERB_AVIEA	ERBB TYROSINE KINASE TRANSFORMING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	111-137								
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN ERYTHROBLASTOSIS VIRUS	64-84	297-324							
PKFES_FSVST	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	51-68								
PKFGA_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	2-22								
PKFMS_FSVMD	PMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	269-288								
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	101-119	243-263	434-450	348-363	781-801	856-877			
PKFPS_FUSSV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRCII)	207-224								
PKITH_ASFB7	THYMIDINE KINASE	FUJINAMI SARCOMA VIRUS	259-275	186-170	400-420	387-417					
PKITH_EBV	THYMIDINE KINASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	18-41								
PKITH_FLDV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	401-418	428-446							
PKITH_HSV11	THYMIDINE KINASE	FISH LYMPHOCYSTIS DISEASE VIRUS	96-117	223-243							
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	223-249								
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	223-249								
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	223-249								
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	223-249								
PKITH_HSV1J	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	223-249								
PKITH_HSVB6	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	224-250	333-348							
PKITH_HSVBH	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 6660)	193-219	280-304							
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 2 (STRAIN BRUM-1)	180-202								
PKITH_HSVBQ	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 2 (STRAIN WCII)	181-199	609-633							
PKITH_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 2 (STRAIN CJ1932)	194-220	282-306							
PKITH_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	174-193	261-284							
PKITH_HSVF	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HVS55A)	18-33	174-193	274-298						
PKITH_HSVFI	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	171-189								
PKITH_HSVGA	THYMIDINE KINASE	ICTALURID HERPESVIRUS 1	14-32								
PKITH_HSVSA	THYMIDINE KINASE	MARMOSET HERPESVIRUS	189-213								
PKITH_ILTVT	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	208-232								
PKITH_VZV4	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	181-202	208-234							
PKITH_VZV7	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 40A2)	197-216								
PKITH_VZVD	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 7-1-1)	197-216								
PKITH_VZVO	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	197-216								
PKITH_VZVW	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN GK)	197-216								
PKKIT_FSVHZ	KIT TYROSINE KINASE TRANSFORMING PROTEIN	VARICELLA-ZOSTER VIRUS (VZV)	197-216								
PKR15_HSV11	GENE 13 PROTEIN KINASE	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 4)	193-214	276-297							
PKR16_HSV11	GENE 16 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	151-167	338-354							
PKR1_HSV11	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	197-217	286-311							
PKR1_HSV2	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 2)	280-296	338-359							
PKR1_HSVEB	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	280-307	338-377							
PKR1_HSVEK	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	286-307								
PKR1_VZVD	SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	159-197								
PKR3_EBV	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	196-211	111-338							
PKR3_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	247-267								
PKR3_HSVEB	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	317-339	441-462							
PKR3_PRVNI	SERINE/THREONINE-PROTEIN KINASE 3	PSEUDORABIES VIRUS (STRAIN NIA-3)	184-185	282-305							

BAD ORIGINAL

PCGENE	P11CTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PKRJ_VZVD	PROBABLE SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	116-131	226-247	354-373						
PKR73_HSV11	GENE 73 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	841-858								
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	359-380	548-575							
PKRBI_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	199-214								
PKRBI_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	199-214								
PKRBI_VARV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	199-214								
PKRF1_SFVKA	POSSIBLE PROTEIN KINASE C20	SHOPE FIBROMA VIRUS (STRAIN KASZA)	83-98								
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-100								
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	52-67								
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	85-100								
PKROS_AV1SU	ROS TYR KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN URJ)	6-29	202-223	284-305						
PKRYK_AVIRU	TYR-PROTEIN KINASE TRANSFORMING PROTEIN R	AVIAN RETROVIRUS RPL30	154-172	221-241							
PKSEA_AVIET	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SE	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN S13)	158-177								
PKSRC_AVI52	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PR2257)	361-377								
PKSRC_AVI5R	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN RASV1441)	361-377								
PKSRC_AVI5S	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S1)	361-377								
PKSRC_AVI5T	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S2)	361-377								
PKSRC_RSVH1	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN H-19)	361-377								
PKSRC_RSVP	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	361-377								
PKSRC_RSVPA	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PA101T)	358-374								
PKSRC_RSVSR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN SCHMIDT-RUPPIN)	361-377								
PKYES_AVI5Y	TYR-PROTEIN KINASE TRANSFORMING PROTEIN Y	AVIAN SARCOMA VIRUS (STRAIN Y7)	361-377								
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	489-511								
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	489-511								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	458-480								
PL52_ADE02	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	237-259								
PL52_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	237-259								
PLECI_FOWPM	HEPATIC LECTIN HOMOLOG	FOWLPOX VIRUS (ISOLATE HP 438[MUNICH])	2-26								
PLMP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-43	79-100							
PLMP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-43	79-100							
PLMP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-43	79-100							
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	181-196	204-226	267-288	291-315	346-369	390-410			
PMCEL_SFVKA	MRNA CAPPING ENZYME, LARGE SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	244-260	556-578	679-699						
PMCEL_VACCC	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-102	265-282	289-312	687-707					
PMCEL_VACCV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN WR)	81-102	265-282	289-312	687-707					
PMCEL_VARV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VARIOLA VIRUS	81-102	265-282	289-312	687-707					
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	217-243								
PMCE_REOVD	MRNA CAPPING ENZYME	REOVIRUS (TYPE 3 / STRAIN DEARING)	358-384	567-588	714-741						
PMOVP_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN S	157-172								
PMOVP_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN	157-172								
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	49-74	178-205							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	25-50	186-201							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	186-201								
PMOVP_TMVCO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	88-107	156-171							
PMTC1_CHVN1	MODIFICATION METHYLASE CV1BI	CHLORELLA VIRUS NC-1A	129-156								
PMTC2_CHVP1	MODIFICATION METHYLASE CV1AII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1 (	72-94								
PMTC3_CHVN1	MODIFICATION METHYLASE CV1BIII	CHLORELLA VIRUS NC-1A	177-192	265-286							
PMYBE_AVELE	P135-GAG-MYB-ETS TRANSFORMING PROTEIN (	AVIAN LEUKEMIA VIRUS E26	104-124								
PMYB_AVIMB	MYB TRANSFORMING PROTEIN	AVIAN MYELOBLASTOSIS VIRUS	218-238	301-326							
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	159-181								
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	84-99								
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	84-99								
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	31-50								
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	57-74								
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	317-342								
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE AC280)	428-446								
PNCAP_IHNV	NUCLEOCAPSID PROTEIN	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	110-137	239-265							

PCGENE	P15CTL219	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNCAP_INSV	NUCLEOCAPSID PROTEIN	IMPATIENS NECROTIC SPOT VIRUS	155-179								
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	40-59								
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	40-59								
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	40-59								
PNCAP_MUMP1	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	156-178								
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	156-178								
PNCAP_PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	36-58	218-236	256-277	321-346					
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	42-58	86-102							
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	42-58	86-102							
PNCAP_PIIB	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	163-184								
PNCAP_PIIH4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	163-184								
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	36-58	321-346							
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	36-58	218-236	321-346						
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	299-322								
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	299-322								
PNCAP_RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	299-322								
PNCAP_RVFVZ	NUCLEOCAPSID PROTEIN	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	158-180								
PNCAP_SENDS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	29-51	86-102							
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	42-58	86-102							
PNCAP_SENDH	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	42-58	86-102							
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	29-51	86-102							
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	112-138	317-342							
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	156-181								
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	219-241								
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	167-189								
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	240-266								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MAKAH)	240-266								
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC	64-80								
PNCAP_VSVSJ											
PNEF_HV2RO	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	110-129								
PNEF_HV2ST	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	106-128								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	3-29								
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	3-24								
PNRAM_IADA1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/78/76)	3-24								
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	3-29								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	3-29	301-317							
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74)	299-315								
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-29								
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	3-24								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	3-24								
PNRAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H3N2)-A/HELLARY/42N)	3-30								
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	3-30								
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-30								
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/60/	3-29								
PNRAM_IASH2	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	3-29								
PNRAM_IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	3-24	56-77							
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	3-29								
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	3-24								
PNRAM_IAWHM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/1/84)	3-29								
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	3-30								
PNRAM_INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	3-20								
PNRAM_INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	3-20								
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	3-20								
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	3-20								
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	3-20								
PNRAM_INBMF	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/89)	3-20								
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	3-20								

PCGENE	P1ICTL2IP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNRAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	3-20								
PNRAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	3-20								
PNRAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	3-20								
PNS1_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	135-151								
PNS2_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	2-26	196-221	381-406						
PNS3_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	60-78								
PNS5_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIH/MR-01)	80-105	411-435							
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	80-105	436-458							
PNTPI_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	20-45	387-403							
PNTPI_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	20-45	387-403							
PNTPI_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	293-309								
PP100_HSV6U	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	182-204	250-270	344-366						
PPAP3_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	79-100								
PPAP3_MYXVA	POLY(A) POLYMERASE REGULATORY SUBUNIT	MYXOMA VIRUS (ISOLATE AUSTRALIA/TARRA/VERG-86/1)	101-116								
PPAP3_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	101-116								
PPAP3_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	101-116								
PPAP3_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	101-116								
PPCNA_NPVAC	PROLIFERATING CELL NUCLEAR ANTIGEN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	67-89	227-244							
PPE31_NPVOP	31.2 KD PROTEIN IN PE 5 REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	117-139								
PPE35_NPVAC	35.1 KD PROTEIN IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	57-81								
PPE38_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-33								
PPEN1_ADE02	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 2	171-195								
PPEN1_ADE05	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 5	171-195								
PPEN1_ADEGX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SA2)	194-214	307-324							
PPIV2_ADE07	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	412-431								
PPIV2_ADEMI	MATURATION PROTEIN	MOUSE ADENOVIRUS TYPE 1	409-428								
PPOL1_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	739-755	835-856	1072-1094	1889-1910					
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	739-755	835-856	1072-1094	1465-1485	1888-1909				
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	691-717	1040-1062	1116-1141						
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	380-396	477-501	545-564	1079-1098	1149-1171	1341-1356	1761-1785	1821-1848	2020-2044
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	1132-1159								
PPOL2_ARMV	RNA2 POLYPROTEIN	ARABIS MOSAIC VIRUS	129-150	243-266	346-367						
PPOL2_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	325-350	463-485							
PPOL2_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	325-350	463-485							
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	808-829	1021-1045							
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	425-446	541-557	856-876	1203-1221					
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	316-340	427-448	1527-1554						
PPOLO_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	1833-1859								
PPOLO_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	627-653	943-965	1119-1134	1282-1297	1363-1387	1868-1892	2460-2487	2608-2628	2883-2898
			3141-3161	3220-3241	3856-3871	3967-3986					
PPOLO_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	627-653	943-965	1119-1134	1138-1163	1889-1205	1282-1297	1363-1387	1778-1802	2370-2397
			2518-2538	2741-2766	2793-2808	3766-3781					
PPOLO_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	850-867								
PPOLO_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A23 (ECHO 9 VIRUS)	67-92								
PPOLO_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1491-1517	1601-1626							
PPOLO_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1472-1498	1582-1607							
PPOLO_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	228-255	1475-1501	1585-1610						
PPOLO_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	821-846	1473-1499	1583-1608						
PPOLO_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1475-1501	1585-1610							
PPOLO_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	918-943	1111-1138	1211-1216	1243-1260	1612-1628	2222-2248	2348-2365	2401-2426	1050-1069
PPOLO_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	919-944	1112-1139							
PPOLO_DEN23	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M3)	336-350								
PPOLO_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	848-868	919-944	1112-1139	1244-1261	1283-1301	1613-1629	2293-2318	2347-2364	2405-2425
			2700-2726								
PPOLO_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	848-868	919-944	1112-1139	1244-1261	1283-1301	1376-1396	1613-1629	2293-2318	2347-2364
			2405-2425	2700-2726							
PPOLO_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	848-868	919-944							

PCGENE	P1CTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOLO_DEN1J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	868-868	919-914	1112-1139	1214-1241	1376-1396	1611-1629	2290-2315	2394-2361	2402-2422
			2701-2726								
PPOLO_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	100-120	171-196	364-391						
PPOLO_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	919-944	1112-1139	1244-1261	1283-1301	1376-1396	1611-1629	2290-2315	2394-2361	2402-2422
			2697-2721								
PPOLO_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	639-664	832-859	964-981	1201-1219					
PPOLO_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	919-944	1110-1139	1241-1259	1278-1301	1376-1396	1611-1629	2290-2315	2394-2361	2402-2422
			2698-2724	1110-1139							
PPOLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	1209-1227	1241-1258	1611-1627	2220-2246	2342-2359	2400-2420	3045-3064		
PPOLO_ECI1G	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY	664-690	774-799							
PPOLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	225-247	558-578	1194-1215	1650-1667					
PPOLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D NONDIABETOGENI	560-580	1120-1141	1196-1217						
PPOLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	560-580	1120-1141	1196-1217						
PPOLO_ENMG1	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	560-580								
PPOLO_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	493-513								
PPOLO_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10 61)	121-141	984-1003	1036-1057	1396-1411	1465-1487	1764-1791			
PPOLO_FMDV5	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A5)	162-183								
PPOLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	121-140	984-1003	1036-1057	1396-1411	1465-1487	1761-1790			
PPOLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIBFS) (	121-141	984-1003	1036-1057	1396-1411	1465-1487	1761-1790			
PPOLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU [C-S8])	301-320								
PPOLO_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	121-141	979-998							
PPOLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	112-133	143-169	619-640	683-699	833-857	2327-2347	2442-2457	2837-2859	
PPOLO_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	102-128	1143-1163	1282-1301	1778-1802	2370-2397	2518-2538	3131-3152	3737-3753	3767-3782
			3877-3893								
PPOLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	102-128	1143-1163	1282-1301	1778-1802	2370-2397	2518-2538	3131-3152	3737-3753	3767-3782
			3877-3893								
PPOLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	112-133	143-169	619-640	683-699	2327-2347	2441-2456	2836-2858	2988-3007	
PPOLO_HCVE1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC1)	27-53								
PPOLO_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	112-133	143-169	619-640	683-699	833-853	863-880	2442-2457	2837-2859	
PPOLO_HCVH1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	112-133	143-169							
PPOLO_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	15-41								
PPOLO_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	27-53								
PPOLO_HCVHK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-K1)	112-133	143-169							
PPOLO_HCVJ1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1)	112-133	143-169							
PPOLO_HCVJ5	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	112-133	143-169	623-644	687-703					
PPOLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	112-133	143-169	623-644	687-703	837-861	1827-1853	2327-2347	2859-2881	3011-3030
PPOLO_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	143-169	623-644	687-703						
PPOLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	112-133	143-169	687-703	837-861	867-884	1172-1188	1827-1853	2859-2881	3011-3030
PPOLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	112-133	143-169	619-640	683-699	833-857	863-880	2327-2347	2836-2858	2988-3007
PPOLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1)	112-133	143-169	619-640	683-699	833-857	863-880	2327-2347	2441-2456	2836-2858
PPOLO_HCVTH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TH)	27-53								
PPOLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	112-133	143-169	619-640	683-699	833-857	2327-2347	2441-2456	2836-2858	2988-3007
PPOLO_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CELDC-1)	103-123								
PPOLO_HPAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	401-428	799-819	1195-1210	1687-1708	2008-2033	2068-2092			
PPOLO_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 4JC	799-819	1195-1210	1687-1708	2008-2033	2068-2092				
PPOLO_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	799-819	1195-1210	1687-1708	2008-2033	2068-2092				
PPOLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	799 819								
PPOLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	778-798								
PPOLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	799-819	1195-1210	1688-1709	2009-2034	2069-2093				
PPOLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	799-819	1195-1210	1688-1709	2009-2034	2069-2093				
PPOLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	799-819	1195-1210	1688-1709	2009-2034	2069-2093				
PPOLO_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	1199-1214	1690-1711	2012-2033	2072-2096					
PPOLO_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14	1383-1406	1962-1983							
PPOLO_HRV1A	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	361-379	547-562							
PPOLO_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	386-404	572-587	859-876	1029-1052	1453-1478	1625-1641	1816-1842	1941-1961	
PPOLO_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	569-584	694-713	1022-1045	1446-1469	1618-1634	1809-1835	1841-1866		
PPOLO_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	576-591	1038-1061	1220-1243	1332-1358	1460-1485	1632-1648	1823-1849	1948-1968	

PCGENE FILE NAME	PIRCTLZIP PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOLO_IRHV1	GENOME POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN BRU/LAI)	1992-1993								
PPOLO_IBDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN D11)	905-923								
PPOLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	938-963	1308-1325	1642-1658	2245-2270	2326-2351	2462-2481			
PPOLO_JAEV5	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	938-963	1308-1325	1642-1658	2245-2270	2326-2351	2462-2481			
PPOLO_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	938-963	1308-1325	1642-1658	2245-2270	2326-2351	2462-2481			
PPOLO_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	866-891	1314-1331							
PPOLO_KUNIM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	561-576	935-960	1307-1326	1643-1659	2246-2271	2327-2352	2440-2460	2463-2483	2641-2658
PPOLO_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	2798-2814								
			67-89	527-551	736-756	835-862	1157-1178	1519-1544	1630-1653	2158-2182	2230-2257
PPOLO_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	2366-2387	2424-2451	2766-2784						
PPOLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	67-89	527-551							
PPOLO_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 526)	67-89	527-551	835-862						
PPOLO_MCFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	247-271								
PPOLO_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	120-137	1174-1199	1402-1428	1788-1805	1872-1887	2012-2029	2810-2827		
PPOLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	39-56								
PPOLO_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	331-347	563-578	937-962	1305-1324	1523-1548	1585-1602	1641-1657		
PPOLO_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	90-110	111-126	678-696	898-914					
PPOLO_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	690-717	826-846	1009-1034	1301-1318	1455-1482	1484-1500	1676-1697	1921-1945	2002-2022
PPOLO_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1409-1432								
PPOLO_POLSL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1410-1433								
PPOLO_POLSW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1408-1431								
PPOLO_POLSJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23127)	1408-1431								
PPOLO_POLSL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P3/LEON/37 AND P3/LEON 12A[1]B)	577-594	1407-1430							
PPOLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	577-594	1407-1430							
PPOLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	153-178	551-571	714-741	1098-1115	1468-1495	1497-1513	2606-2624	3084-3106	
PPOLO_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	981-999	1481-1483							
PPOLO_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	153-178	713-740	1097-1114	1467-1494	1496-1512	2605-2623	3068-3090		
PPOLO_PRSVH	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P7 MUTANT HA)	153-178	713-740	1097-1114	1467-1494	1496-1512	2605-2623	3083-3105		
PPOLO_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P7 MUTANT HA 5-1)	272-290								
PPOLO_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	163-181								
PPOLO_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPDI)	163-181								
PPOLO_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	47-62	251-268	339-357	654-674	981-1001	1411-1428	1565-1592	2708-2726	
PPOLO_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	755-776								
			755-776	964-982	1010-1036	1109-1125	1456-1483	1485-1501	1677-1698	1922-1946	2588-2606
PPOLO_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	3004-3026								
PPOLO_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	755-776	964-982	1010-1036	1109-1125	1456-1483	1485-1501	1677-1698	1922-1946	2590-2608
PPOLO_PYFVI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	755-776								
PPOLO_STEVM	GENOME POLYPROTEIN	ST LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	592-616	1326-1351	1626-1651	1903-1924	2621-2642	2702-2729	2766-2783		
PPOLO_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	1301-1324								
PPOLO_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UK/'76)	39-56								
PPOLO_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UK/27/72)	1475-1501	1585-1610							
PPOLO_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	1475-1501	1585-1610							
PPOLO_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	67-89	527-551	1363-1378	1519-1544	1630-1653	1740-1761	2230-2257	2366-2387	2765-2783
PPOLO_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV	67-89	527-551	835-862	1519-1544	1630-1653	2230-2257	2366-2387	2766-2784	
PPOLO_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8386)	827-853	951-980	1016-1042	1314-1330	1307-1324	1490-1506	1658-1677		
PPOLO_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	924-941	1074-1095	1119-1140	1520-1546	1658-1677				
PPOLO_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1072-1093	1117-1138	1518-1544	1656-1675					
PPOLO_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	645-670	924-941	1074-1095	1119-1140	1520-1546	1658-1677			
PPOLO_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	23-39	970-991	1138-1156	1593-1595					
PPOLO_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	404-428	497-517	660-687	850-866	967-992	1357-1374	2537-2562		
PPOLO_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	198-218								
PPOLO_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	557-572	931-956	1303-1322	1639-1655	2240-2267	2324-2349	2437-2457	2638-2655	2795-2811
PPOLO_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN FRENCH VACCINE)	74-95	1157-1179	1228-1248	1385-1405	1495-1511	1625-1641	1761-1778	2239-2254	
PPOLO_YEFV8	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899/81)	74-95	1157-1179	1228-1248	1385-1405	1495-1511	1625-1641	1761-1778	2239-2254	
PPOLH_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1410-1433								
PPOLN_EEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON)	90-107	215-234	611-634	1001-1018	1153-1178	1923-1939	2129-2144	2201-2221	

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI68 FIV)	443-469	748-766	902-923	1069-1088					
PPOLN_FCVF4	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	300-326								
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	171-188	262-283	919-945	1224-1242	1378-1399	1545-1564			
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	250-266	1374-1391							
PPOLN_HEVMC	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	250-266	1372-1389							
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	250-266	1374-1391							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	249-265	1373-1390							
PPOLN_MIDDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	488-512	628-643	700-720						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	90-107	613-634	2148-2163	2220-2240					
PPOLN_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	156-180	270-292	299-320	479-505	1330-1351	1459-1479	1491-1509		
PPOLN_RHDV3	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351)	115-135								
PPOLN_RRVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	89-106	611-632	2113-2128	2185-2205					
PPOLN_RRVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	782-797	854-874							
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	14-37	97-113	263-279	670-694	901-918	1374-1391	2035-2052		
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	91-108	617-643	2062-2077	2134-2154					
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	620-646	1121-1150	1790-1814	2148-2168	2220-2240				
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	620-646	1121-1150	1744-1763	1790-1812	2146-2161	2218-2238			
PPOLR_EPMV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	808-833								
PPOLR_OYMV	RNA REPLICASE POLYPROTEIN	ONONIS YELLOW MOSAIC VIRUS	707-727	941-962							
PPOLR_TYMV	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS	212-233	436-453	1173-1192						
PPOLR_TYMVA	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	212-233	436-453	1173-1192						
PPOLR_TYMVC	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (ISOLATE TYMC)	212-233	436-453	1173-1192						
PPOLS_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	35-50	213-229	491-507						
PPOLS_EEEV3	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	35-50	214-230	492-508						
PPOLS_EEVV1	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	32-48	229-245	504-522						
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON	32-48	229-245	504-522						
PPOLS_IBDV3	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	900-922								
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN D	900-922								
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	900-922								
PPOLS_IBDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	881-903								
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	900-922								
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	688-708								
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	1216-1243								
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	281-302								
PPOLS_RUBVM	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN M33)	280-301								
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	281-302								
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	281-302	1041-1060							
PPOLS_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	35-59	751-772	780-801						
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	33-52								
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	33-52								
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	36-51	909-933							
PPOL_AVIRE	POL POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	283-303								
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	526-544	973-993	999-1019	1070-1091					
PPOL_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	101-119	742-768	868-889						
PPOL_BIV27	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	101-119	742-768	868-889						
PPOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	487-504								
PPOL_BLVJ	POL POLYPROTEIN (REVERSE TRANSCRIPTASE	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	487-504								
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	393-419	636-671							
PPOL_CAMVC	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	184-204	380-407	471-494						
PPOL_CAMVD	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D11)	175-199	375-402	466-489						
PPOL_CAMVE	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	184-204	380-407	471-494						
PPOL_CAMVN	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	70-97	185-205	381-408	472-495					
PPOL_CAMVS	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	184-204	380-407	471-494						
PPOL_CERV	ENZYMATIC POLYPROTEIN	CARNATION ETCHED RING VIRUS	161-186	453-478							
PPOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	320-343	1286-1311	1606-1622	1641-1665					
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	437-456								
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	437-456								

BAD ORIGINAL

PCGENE	FUNCTION	All Viruses (No Bacteriophage)							
FULLNAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	436-435						
PPOL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS (CE1)	183-401						
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	856-876						
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	407-436	733-755					
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	407-436	733-755					
PPOL_FMVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	406-435	663-690	735-775	1041-1060			
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS	191-212	464-487					
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	126-147	768-788					
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	59-80	911-991	1048-1071				
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	130-148						
PPOL_HTLV3	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE III	130-148						
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	609-637						
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	860-887						
PPOL_HV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH5 ISOLATE)	635-660	871-899					
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	872-899						
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	872-899						
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	622-647	859-886					
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	860-887						
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	864-891						
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MN ISOLATE)	859-886						
PPOL_HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	861-890						
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	621-648	860-887					
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	622-647	859-886					
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV2 ISOLATE)	860-887						
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RF/HAT ISOLATE)	635-660	872-899					
PPOL_HV1UK	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (STRAIN UGANDA/1/50	859-886						
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ZAIRE 2 ISOLATE)	622-647	859-886					
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	5-32						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	379-406	907-934					
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	886-913						
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	397-424	925-952					
PPOL_HV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	907-934						
PPOL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	359-386	887-914					
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	341-364	771-792	881-914				
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	888-915						
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	359-386	887-907					
PPOL_IAPIA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	379-406	907-934					
PPOL_IAPMA	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	166-190	198-223	460-477				
PPOL_IAPMJ	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	183-201	209-236	506-523	531-552	769-789		
PPOL_ISKV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET	102-120	128-155	407-421	435-442			
PPOL_MCTD	POL POLYPROTEIN	MONK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	186-213	507-526	660-679				
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	37-53						
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	611-631	728-744					
PPOL_MLVCB	POL POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	335-354	978-998	1004-1024	1081-1097			
PPOL_MLVFS	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	64-84	90-110	157-183				
PPOL_MLVFT	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	340-359	981-1003	1009-1029	1086-1102			
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-211)	340-359	981-1003	1009-1029	1086-1102			
PPOL_MLVMO	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	340-359	981-1003	1009-1029	1086-1102			
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	335-354	978-998					
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	335-354	978-998	1004-1024	1081-1097			
PPOL_MMTVB	POL POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	161-181	189-209	446-462				
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	196-219	731-751					
PPOL_OMVV3	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	741-761						
PPOL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	369-395	469-488	612-647	1045-1061			
PPOL_RTBV	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	719-742						
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	891-915	1038-1083					
			891-915	1018-1043					

BAD ORIGINAL

PCGENE	PIR:T12217	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	110-204	335-356	845-869	916-994					
PPOL_SFV3L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	186-206	337-358	847-871	918-968					
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	186-206	337-358	847-871	918-968					
PPOL_SIVAO	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1) ISOLATE)	691-915								
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GM-1)	711-726	900-920							
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	199-926								
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	126-141	915-935							
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	184-911								
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	680-695	869-896							
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	186-407	938-935							
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	186-407	712-733	906-931						
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F2165M14 ISOLATE)	141-170	871-898							
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (PROVIRUS)	346-373	874-901							
PPOL_SMSAV	POL POLYPROTEIN	SIMIAN SARCOMA VIRUS	748-768								
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	199-120	177-206							
PPOL_SRVI	POL POLYPROTEIN	SIMIAN RETROVIRUS	111-135								
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	743-763								
PPOL_VILVI	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514) CLONE LV1-1K51)	488-507	651-666	971-991						
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514) CLONE LV1-1K52)	488-507	651-666	971-991						
PPP15_HCMVA	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	488-507	651-666	971-991						
PPP28_HCMVA	28 KD STRUCTURAL PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153-171	181-210							
PPP41_HSVSG	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	116-141								
PPP65_HCMVA	65 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-175	196-211							
PPP65_HCMVT	64 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN GR)	311-333								
PPP71_HCMVA	71 KD UPPER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	301-333								
PPR71_MATVG	PROTEIN PR71	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-102								
PPR71_MATVG	PROTEIN PR71	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	40-61								
PPR71L_MATVG	PROTEIN PR71	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PRASH_MSVHA	TRANSFORMING PROTEINS P21 AND P29	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	44-65								
PRASH_MASV	TRANSFORMING PROTEINS P21 AND P29	HARVEY MURINE SARCOMA VIRUS	40-61								
PREP_CSV	REPEAT ELEMENT PROTEIN	RASHEED RAT SARCOMA VIRUS	49-73								
PRER_VACCV	RIFAMPICIN RESISTANCE PROTEIN	CAMPOLETIS SONORENSIS VIRUS	56-80								
PRER_VARV	RIFAMPICIN RESISTANCE PROTEIN	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	14-36								
PREV_SIVAO	REV PROTEIN	VARIOLA VIRUS	274-298	316-333	517-535						
PREV_SIVGB	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	274-298	316-333	517-535						
PRIR1_ASFM2	RIBONUCLEOSIDE DIPHOSPHATE REDUCTASE	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	2-17								
PRIR1_EBV	RIBONUCLEOTIDE REDUCTASE	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	45-72								
PRIR1_HCMVA	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	139-164	189-210	495-510						
PRIR1_HSV11	RIBONUCLEOTIDE REDUCTASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	793-812								
PRIR1_HSVEB	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	192-212	669-684							
PRIR1_HSVSA	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	415-430	587-613							
PRIR1_VACCC	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	60-85	266-288	668-694						
PRIR1_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-151								
PRIR1_VARV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	36-51								
PRIR1_VZVD	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	36-51								
PRIR2_EBV	RIBONUCLEOTIDE REDUCTASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	34-58	221-247	258-280						
PRIR2_HSV11	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	209-236								
PRIR2_HSVIK	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	44-64	275-292							
PRIR2_HSV23	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	43-63	245-261	274-291						
PRIR2_HSVEB	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	41-61	272-289							
PRIR2_HSVEB	RIBONUCLEOTIDE REDUCTASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 24)	244-266								
PRIR2_HSVSA	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	61-88	231-253							
PRIR2_SFVEA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	212-239								
PRIR2_VACCC	RIBONUCLEOTIDE REDUCTASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	184-206	213-237							
PRIR2_VACCP	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	184-206								
PRIR2_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN LIVP	184-206								
		VACCINIA VIRUS (STRAIN WR)	184-206								

BAD ORIGINAL

PECGENE	P1ICTLEP	All Viruses (No Bacteriophage!)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4
PIUR3_VARV	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	194-208	215-237						
PIUR3_VZVD	RIBONUCLEOTIDE REDUCTASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	233-258							
PIMIL_AVEVR	RMIL SER/THR-PROTEIN KINASE TRANSFORMING P	AVIAN ROUS-ASSOCIATED VIRUS TYPE 1	160-405							
PIPOM_VACCV	RNA-POL-ASSOCIATED TRANSCRIPTION SPECIFACT	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	172-189	265-290	171-194	561-581				
PIPOM_VARV	RNA-POL-ASSOCIATED TRANSCRIPTION SPECIFACT	VARIOLA VIRUS	172-189	265-290	171-194	561-578				
PIPOI_VACCC	DNA-DIRECTED RNA POL 147 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-96	304-329	848-871	1005-1027				
PIPOI_VARV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	76-96	304-329	848-871					
PIPOI_CAPVK	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPE	CAPRIPOXVIRUS (STRAIN KS-1)	76-96	304-329	848-871	1005-1027				
PIPOI_COWPX	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPE	COWPOX VIRUS	11-29	417-498						
PIPOI_VACCV	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPE	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	150-170	358-374	480-503					
PIPOI_VARV	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPE	VARIOLA VIRUS	150-170	358-374	480-503					
PIPOM_VACCC	DNA-DIRECTED RNA POLYMERASE 33 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	150-170	358-374	480-503					
PIPOM_VACCV	DNA-DIRECTED RNA POLYMERASE 33 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	33-48							
PIPOM_VARV	DNA-DIRECTED RNA POLYMERASE 33 KD POLYPEP	VARIOLA VIRUS	33-48							
PIPOM_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	33-55							
PIPOI_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-59							
PIPOI_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	38-59							
PIPOI_FOWPI	DNA-DIRECTED RNA POLYMERASE 18 KD POLYPEP	VARIOLA VIRUS	38-59							
PIPOA_LELV	RNA-DIRECTED RNA POLYMERASE	FOWLPOX VIRUS (STRAIN FP-1)	57-81							
		LELYSTAD VIRUS	175-197	307-329	1161-1184	1215-1238	1511-1536	1644-1667	1709-1731	1802-1824
PIPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	1133-1156							
PIUP1_DMVII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	DHORI VIRUS (STRAIN INDIAN/1111/61)	97-118	601-617	334-374	875-951	1530-1551	1641-1664		
PIUP1_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	247-264	235-299	111-169	1173-1194	1668-1691			
PIUP1_IABEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BEIJING/11/56)	244-262							
PIUP1_IADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/DUNLIN/4/73)	244-262							
PIUP1_IAGUJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/54/89)	244-262							
PIUP1_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/54/89)	244-262							
PIUP1_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/HEILONGJIANG/1/79)	244-262							
PIUP1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	244-262							
PIUP1_IALEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	244-262							
PIUP1_IALEJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	244-262							
PIUP1_IAMON	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	244-262							
PIUP1_IANEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	244-262							
PIUP1_IANTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/3/72)	244-262							
PIUP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	244-262							
PIUP1_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	244-262							
PIUP1_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	244-262							
PIUP1_IAVIT	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	244-262							
PIUP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	138-165	244-262						
PIUP1_IAWIS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	244-262							
PIUP1_IAZRO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/33/80)	244-262							
PIUP1_IAZON	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1076/82)	244-262							
PIUP1_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	244-262							
PIUP1_IBBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN A/SWINE/TENNESSEE/10/77)	244-262							
PIUP1_IBBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	205-222							
PIUP1_IBBLE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	205-222							
PIUP1_IBCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	205-222							
PIUP1_IACAL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	117-141	564-591						
PIUP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	534-557							
PIUP2_IADKD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/80)	534-557							
PIUP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	534-557							
PIUP2_IAGUJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/54/89)	534-557							
PIUP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/QUINGLONDON/1416/71)	534-557							
PIUP2_IALEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	534-557							

ORIGINAL

PCGENE	FUNCTION	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PRDF1_IAPOO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	534:557							
PRDF1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	534:557							
PRDF1_IASDD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/87)	534:557							
PRDF1_IASDN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	534:557							
PRDF1_IATUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	534:557							
PRDF1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	68:86							
PRDF1_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	534:557							
PRDF1_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1626/81)	534:557							
PRDF1_IAZIT	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/ITOWA/35/30)	534:557							
PRDF1_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	536:557							
PRDF1_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	32:54							
PRDF1_INBSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	32:54							
PRDF1_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	32:54							
PRDF1_INJAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	406:435							
PRDF1_IAAUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	342:360							
PRDF1_IACHI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/JAPAN/KAKIOKA/1/77)	219:234							
PRDF1_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	219:234							
PRDF1_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	342:360							
PRDF1_IAGUI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	219:234							
PRDF1_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GUILLMARYLAND/704/77)	219:234							
PRDF1_IAHKA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GUILLASTRAKHAN/263/82)	342:360							
PRDF1_IAHKO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/HONG KONG/8/68)	342:360							
PRDF1_IAJAPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/78/86)	219:234							
PRDF1_IAJE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/63)	219:234							
PRDF1_IAKE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	219:234							
PRDF1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	342:360							
PRDF1_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	219:234							
PRDF1_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	342:360							
PRDF1_IALM49	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	219:234							
PRDF1_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	342:360							
PRDF1_IAMEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	219:234							
PRDF1_IANTG	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	219:234							
PRDF1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	219:234							
PRDF1_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/68)	469:485							
PRDF1_IASE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	342:360	342:360						
PRDF1_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	219:234							
PRDF1_IATUH	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	342:360							
PRDF1_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	342:360							
PRDF1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	219:234							
PRDF1_IAZIT	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/ITOWA/35/30)	219:234							
PRDF1_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	342:360							
PRDF1_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	31:86							
PRDF1_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	31:86							
PRDF1_THOGV	RNA-DIRECTED RNA POL SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	74:96							
PRDF2_CVHOZ	RNA-DIRECTED RNA POLYMERASE	THOGOTO VIRUS	74:96							
PRDF2_CVMJH	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	83:101							
PRDF2_CVMUH	RNA-DIRECTED RNA POLYMERASE	MURINE HEPATITIS VIRUS (STRAIN DEFECTIVE JHM)	82:104	410:436	838:878	1402:1507	1521:1542	1543:1568	2135:2149	2974:2992
PRDF2_CVMUN	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	440:467							
PRDF2_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	917:938	1188:1213	1338:1354	1422:1449	1461:1480	1567:1585	1781:1806	2165:2192
PRDF2_CVMAS	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	2470:2494	2660:2676	3044:3061	3229:3253	3405:3425	3933:3954		
PRDF2_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	806:832	1509:1527	1738:1757	2117:2134				
PRDF2_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	385:412	1102:1124	1315:1330	1698:1715				
PRDF2_CVPR1	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/1) FROM / BRITISH	172:200	765:776	1101:1124	1813:1848	2696:2721			
PRDF2_BYV8	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	482:508	805:816						
PRDF_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	140:164	338:345	887:911	1335:1357	1654:1674			
			11:41	146:161						

BAD ORIGINAL

PCGENE FILENAME	PIRCLEAN PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRVPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	78-104	101-124	440-465	1096-1116	1117-1138	1141-1161	1170-1196	1809-1826	2001-2027
PRVPL_EBOV	RNA-DIRECTED RNA POLYMERASE	EBOLA VIRUS	16-31								
PRVPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	151-168	171-194	496-511	1361-1385	2081-2105				
PRVPL_I03V	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	3-19								
PRVPL_I03VA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	3-19	1181-1206	1425-1447	1633-1653	1929-1948	2018-2037			
PRVPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	15-30	144-169	221-248	1117-1141	431-492	546-569	911-948	1042-1067	1410-1436
PRVPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	1311-1331	1990-2017	2071-2094						
			15-30	144-169	221-248	431-492	546-569	911-948	1042-1067	1410-1436	1677-1696
PRVPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	1315-1331	1805-1832	1990-2017	2071-2094	2222-2246				
PRVPL_MUMPN	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	285-312	617-632	998-1021	1165-1185	1379-1404	1930-1960	2018-2065		
PRVPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45)	43-66	116-135	265-280	963-983	1100-1124	1112-1153	1601-1632	2138-2143	
PRVPL_PIVH1	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	704-724	1571-1592	1967-1994	2040-2067	1309-1335	1362-1388	1985-2010	2215-2234	
PRVPL_PIVH4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NIH 47885)	109-124	172-191	208-231	884-901	1362-1388	1985-2010	2215-2234		
PRVPL_PUUHH	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	172-191	204-230	884-901	1362-1388	1848-1868	2068-2084	2111-2134		
PRVPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	133-154	196-211	1361-1385	1677-1696	2086-2110				
PRVPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	266-286	343-363	741-762	1446-1461	1492-1517				
PRVPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	266-286	343-363	741-762	1446-1461	1492-1517	1744-1761			
PRVPL_RVFV2	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	10-27	533-560	660-697	1291-1316					
PRVPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	382-409	2009-2035							
PRVPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	64-83	104-120	194-218	844-861	885-900	1405-1420	1844-1864	2107-2128	
PRVPL_SEOUR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	16-35	64-83	105-120	1225-1240	1664-1684	1927-1948			
PRVPL_SVHVR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004 WR)	151-168	173-194	194-218	844-861	885-900	1405-1420	1844-1864	2107-2128	
PRVPL_SVNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	41-66	108-124	263-289	896-911	1361-1385	2080-2105			
PRVPL_TSWVS	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CNPH1/BR-01)	126-146	191-206	603-627	704-731	1123-1147	1538-1580	2117-2137		
PRVPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	958-974	1385-1410	1778-1800	2609-2627	2678-2702	863-881	886-911	1484-1510	1776-1792
PRVPL_VSVIN	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN IN)	698-714	913-948	1404-1431	1578-1601	2060-2081				
PRVPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN IO)	156-183	112-139	903-928	1916-1982	2080-2101				
PRVPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	1936-1982								
PRVPO_BWYVP	PUTATIVE RNA-DIRECTED RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	226-247	1036-1054	1112-1153	1773-1801					
PRVPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	299-326	359-388	391-416	505-532					
PRVPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	359-386	391-416	505-532						
PRVPO_BYDVR	PROBABLE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	359-386	391-416	505-532						
PRVPO_CARMV	PUTATIVE RNA-DIRECTED RNA POL	CARNATION MOTTLE VIRUS	4-30	92-107	227-250	818-833					
PRVPO_CGMVS	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN	443-466	574-591	1017-1032	1533-1559					
PRVPO_CNV	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER NECROSIS VIRUS	277-300	345-371	470-494						
PRVPO_DMVI	PUTATIVE RNA-DIRECTED RNA POL	CYMBIDIUM RINGSPOT VIRUS	96-111	345-371	470-494						
PRVPO_LYCVA	RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	221-238								
PRVPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	35-52	597-613	659-682	988-1008	1234-1258	1770-1793	2077-2099		
PRVPO_MCMV	PROBABLE RNA-DIRECTED RNA POL	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	35-52								
PRVPO_MEAMV	RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	16-41	101-127	573-599						
PRVPO_PEAV	PUTATIVE RNA-DIRECTED RNA POL	PEA ENATION MOSAIC VIRUS	144-161	316-336	411-436	558-574					
PRVPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN 1)	331-358	576-600							
PRVPO_PMV3	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	331-358	576-600							
PRVPO_RCMMV	PUTATIVE RNA-DIRECTED RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	335-393	703-726	1069-1096	1491-1507					
PRVPO_REOVI	RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	278-300								
PRVPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN JONES)	181-176								
PRVPO_ROTBA	RNA-DIRECTED RNA POL SUBUNIT VP1	REOVIRUS (TYPE 1 / STRAIN LANG)	181-176								
PRVPO_ROTBU	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN B1)	132-156	247-269	844-861	904-921	942-967	1017-1046			
PRVPO_ROTBC	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	132-156	247-269	844-861	904-921	942-967	1017-1046			
PRVPO_ROTPO	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	198-223	354-374	818-837	904-921	942-967	1017-1046			
PRVPO_ROTSI	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	32-51	111-136	247-269	765-784	856-878	916-937			
PRVPO_SIMV	PROBABLE RNA-DIRECTED RNA POL	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	132-156	247-269	844-861	904-921	944-961	904-921	942-967	1027-1046	
PRVPO_TACV	RNA POLYMERASE	SOUTHERN BEAN MOSAIC VIRUS	38-64	122-143	181-206	287-302	942-967	1017-1046			
		TACAIBE VIRUS	88-107	169-189	1281-1301	1876-1892	444-466	2019-2046	835-861		

PCGENE	PTECTSEP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA3	AREA4	AREA1	AREA1	AREA2
PRUPO_TBSVC	PUTATIVE RNA-DIRECTED RNA POL	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	277-300	345-371	470-494	1					
PRUPO_TCV	PUTATIVE RNA-DIRECTED RNA POL	TURNIP CRINKLE VIRUS	31-58	241-267							
PRUPO_TMGMV	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	309-331	1083-1100							
PRUPO_TMV	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (VULGARE)	700-724	1090-1105	1587-1610						
PRUPO_TMVCR	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	700-724	1090-1105	1587-1610						
PRUPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN TOMATO)	700-724	1090-1105	1587-1610						
PRUPO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A)	700-724	1090-1105	1151-1170	1581-1610					
PRUPP_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	113-135								
PRUPP_CHAV	RNA POLYMERASE ALPHA SUBUNIT	CHANDIPURA VIRUS (STRAIN 1653164)	5-26								
PRUPP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	124-146								
PRUPP_MUMPH	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	211-233								
PRUPP_MUMPN	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-239								
PRUPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	236-276								
PRUPP_NDV	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/74)	236-276								
PRUPP_PIVH1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS	216-243								
PRUPP_PIVH3	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	216-243								
PRUPP_PIVH4	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	220-247								
PRUPP_PIVH4B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 48-333)	220-247								
PRUPP_PIVV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-161								
PRUPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	8-33								
PRUPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	8-33								
PRUPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	8-33	216-237							
PRUPP_RABVF	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	8-33	216-237							
PRUPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	8-33	216-237							
PRUPP_VSVO	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	199-226	282-301							
PSITR_ASFBT	SITIN PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OG	197-223								
PSODC_VACCC	SUPEROXIDE DISMUTASE LIKE PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	196-218								
PSODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-40								
PSODC_VALV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-40								
PSPHR_AMEPV	SPHEROIDIN	VARIOLA VIRUS	19-40								
PSPHR_CREPV	SPHEROIDIN PRECURSOR	AMSACTA MOOREI ENTOMOPOXVIRUS	18-39	637-656							
PSPTI_ANTAVL	SEURIN 1	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	177-201								
PSWIA_SFVSA	SWI1A PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	61-80	217-241							
PTALA_BFDV	LARGE T ANTIGEN	SWINEPOX VIRUS (STRAIN KASZA)	61-83								
PTALA_POVBA	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	354-369								
PTALA_POVBK	LARGE T ANTIGEN	POLYOMA VIRUS BK (STRAIN AS)	202-224	428-444							
PTALA_POVBO	LARGE T ANTIGEN	POLYOMA VIRUS BK	202-224	428-444							
PTALA_POVHA	LARGE T ANTIGEN	BOVINE POLYOMA VIRUS	383-400								
PTALA_POVJC	LARGE T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69	349-364							
PTALA_POVLY	LARGE T ANTIGEN	POLYOMA VIRUS JC	201-223	428-443							
PTALA_POVMU	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	43-69	516-542							
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN 3)	576-591								
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN A2)	574-589								
PTALA_POVMK	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	571-586								
PTALA_SV40	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN KILHAM)	173-191	376-394	446-472						
PTALG_POVHA	MIDDLE T ANTIGEN	SIMIAN VIRUS 40 (SV40)	200-222	427-442							
PTASH_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69								
PTASH_POVLY	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMA VIRUS	43-69								
PTASH_POVMK	SMALL T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN KILHAM)	43-69	67-89							
PTATR_NPVAC	TRANS-ACTIVATING TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	406-431								
PTATR_NPVBM	TRANS-ACTIVATING TRANS REG PROTEIN	BOMBYX MONI NUCLEAR POLYHEDROSIS VIRUS	411-436								
PTAT_BIVG	TRANS-ACTIVATING TRANS REG PROTEIN	CROTYLA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	389-414								
PTAT_BIVJ1	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 186)	44-59								
PTAT_HTLIA	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	44-59								
PTAT_HTLIC	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	192-210								

BAD ORIGINAL

PCGENE	PIRCLUP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2	AREA1	AREA2
PTAT_HV1U4	TAT PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / 150)	18-43								
PTCL_FLV	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	6-22	98-110							
PTEGP_HSVE8	PROBABLE TEGUMENT PHOSPHOPROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-110								
PTEGP_HSVEK	TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	101-110								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	141-166	787-789	814-833	1032-1053	1184-1220	1469-1486	1869-1893	2061-2077	2102-2126
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	342-358	644-648	1061-1077	1307-1322	1323-1345	1419-1446	1509-1536	1957-1974	2199-2221
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	12-27	633-648	1312-1339						
PTEGU_HSVVO	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 0 / STRAIN 05)	131-152	345-365	613-636	1027-1043	1308-1328	1562-1579			
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	433-456	559-582	1072-1099	1107-1132	1618-1640	1784-1791	2263-2285		
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	467-491	714-737	989-1008	1121-1137	1135-1174	1177-1193	1501-1523	1607-1622	1898-1915
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	2431-2439	433-456	494-511	711-728	801-823	895-920	1013-1034	1360-1376	1632-1657	1780-1807
PTEIM_ADE01	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	2009-2029	2230-2287	2604-2711						
PTEIM_ADE01	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	63-80	591-616							
PTEIM_ADE01	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	63-80	591-616							
PTEIM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	63-80	580-601							
PTOP1_ASFB7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	44-63	334-350	346-369						
PTOP1_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	119-144	686-707							
PTR14_HCMVA	HYPOTHETICAL PROTEIN TRL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	119-144	685-706							
PTRE_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	139-165								
PTYSY_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	56-74								
PUIR_HSVGU	POSSIBLE DEOXYURIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	11-29								
PUL8_HSVGU	PROTEIN 8L	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	400-415								
PUDP_NPVAC	UDP-GLUCOSYLTRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	6-27								
PUL01_HCMVA	HYPOTHETICAL PROTEIN UL2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	433-477								
PUL03_HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-49								
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	11-37								
PUL06_HCMVA	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	233-268								
PUL08_HSV11	VIRION PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	191-208								
PUL08_HSVEB	VIRION GENE 14 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	404-429								
PUL08_HSVSA	VIRION GENE 8) PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	417-461								
PUL08_EBV	BBRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	44-60								
PUL09_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	127-149								
PUL09_HSV11	PROTEIN UL7	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	88-108	186-209							
PUL09_HSVEB	GENE 15 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	177-200								
PUL09_HSVSA	GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	11-32								
PUL09_VZVD	GENE 35 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	44-61								
PUL10_HSV11	PROTEIN UL9	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	158-176	202-224							
PUL10_VZVD	GENE 51 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	314-338	769-786							
PUL11_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	228-253	593-616							
PUL11_HSVEB	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	564-584								
PUL11_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	171-196	612-628							
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-92	168-190	486-508						
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	223-247								
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	449-467								
PUL14_HSV11	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	280-299								
PUL14_HSVEB	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	96-116								
PUL14_HSVSA	HYPOTHETICAL GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	100-117								
PUL15_HSV11	PROTEIN UL15	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	22-49								
PUL15_HSVEB	GENE 44 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	28-43	98-119	324-339						
PUL15_HSVSA	GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	69-87	278-295							
PUL15_VZVD	GENE 44 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-80	317-332							
PUL17_EBV	PROTEIN BGLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	333-393								
PUL17_HCMVA	HYPOTHETICAL PROTEIN UL17	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-82								
PUL17_HSV11	PROTEIN UL17	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	156-181								
PUL17_HSVSA	GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	94-118	348-370							
PUL19_HCMVA	HYPOTHETICAL PROTEIN UL19	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	61-85								

BAD ORIGINAL

PCGENE	PISCTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PUL20_PRVND	UL20 MEMBRANE PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	54-78								
PUL36_VZVD	GENE 39 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201-224								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	91-110								
PUL31_HSV11	PROTEIN UL31	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	98-116	130-148							
PUL31_HSV1B	PROTEIN UL31	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	98-116	130-148							
PUL31_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	110-142	294-321	379-403	412-427					
PUL31_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	270-293	300-327							
PUL32_HCMVA	HYPOTHETICAL PROTEIN UL32	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	44-67								
PUL34_EBV	PROTEIN BXRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	134-155								
PUL34_HCMVA	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	206-222								
PUL34_HSV11	PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	147-166								
PUL34_ILTVT	PROTEIN UL34 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	158-179								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	484-500								
PUL35_HSV11	VIRION PROTEIN UL35	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	86-101								
PUL35_HSVEB	VIRION PROTEIN UL35	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-104	134-147							
PUL35_HSV8A	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	244-265	344-368							
PUL35_ILTVT	64 1 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	270-287	316-336							
PUL37_HCMVA	HYPOTHETICAL PROTEIN UL37	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	307-324	486-507							
PUL39_HCMVA	HYPOTHETICAL PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	239-266								
PUL30_HCMVA	HYPOTHETICAL PROTEIN UL30	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-32								
PUL31_EBV	PROTEIN BFLF2	EPSTEIN-BARR VIRUS (STRAIN U95-8)	273-296								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	410-437	582-602							
PUL31_HSV11	PROTEIN UL31	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	95-116								
PUL31_HSVEB	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-125	288-309							
PUL31_HSV8A	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	145-161	183-190							
PUL31_VZVD	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-138	295-316							
PUL32_HSV11	PROBABLE MAJOR ENV GLYCOPROTEIN UL32	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	127-143	564-585							
PUL32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	81-108								
PUL32_VZVD	PROBABLE MAJOR ENV GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	553-574								
PUL33_HCMVA	G-PROTEIN COUPLED REC HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	76-102								
PUL34_HCMVA	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	214-232	297-321							
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	251-275								
PUL34_HSVEB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	249-264								
PUL34_HSV8A	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	207-229								
PUL34_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	244-266								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	229-252	318-329	331-348						
PUL36_HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	143-168	387-410							
PUL37_EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	21-36	135-155	707-730	984-1004					
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	229-252	262-277	445-467	665-681	758-777	925-947	1009-1028		
PUL37_HSV8A	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	414-440	491-510	664-690	778-805	901-919				
PUL37_VZVD	GENE 23 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	5-20								
		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	4-19	104-124	140-165	168-191	196-212	229-244	248-269	670-694	776-803
PUL38_HCMVA	HYPOTHETICAL PROTEIN UL38		904-923								
PUL40_HCMVA	HYPOTHETICAL PROTEIN UL40	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	199-220								
PUL41_HCMVA	HYPOTHETICAL PROTEIN UL41	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	18-35								
PUL43_HSV11	MEMBRANE PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	15-31	116-134							
PUL43_HSVEB	GENE 17 MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-63	139-160	343-365	394-421					
PUL43_VZVD	GENE 15 MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	34-60	86-107							
PUL45_HSV11	PROTEIN UL45	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	88-114	127-146	160-180	277-299	374-400				
PUL45_HSV1K	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	25-46								
PUL45_HSV1M	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	25-46								
PUL47_HCMVA	PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	25-46								
PUL47_HSV11	VIRION PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	193-218	438-464	533-556	614-640	741-766				
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-425								
PUL47_HSVBP	80 7 KD ALPHA TRANS-INDUCING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	404-425								
PUL47_HSVEA	97 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN PB-2)	681-702								
		EQUINE HERPESVIRUS TYPE 4	580-601								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	587-608								
PUL47_VZVD	ALPHA TRANS-INDUCING FACTOR 91 8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	42-58	608-627							
PUL49_EBV	HYPOTHETICAL BFRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	336-358								
PUL49_HCMVA	HYPOTHETICAL PROTEIN UL49	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	248-264	528-543							
PUL49_HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	226-252								
PUL49_HSV8A	HYPOTHETICAL GENE 66 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	232-253								
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	96-119								
PUL51_HSV11	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	49-66								
PUL51_HSVE4	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	169-190								
PUL51_HSV2D	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	166-189								
PUL51_VZVD	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	30-49								
PUL52_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	44-59								
PUL52_HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	17-37	65-91							
PUL52_HSVE4	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	8-27								
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	8-27	135-159	176-197						
PUL52_HSV8A	PROTEIN-B DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	489-508	586-605							
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	446-466	645-670							
PUL53_HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	173-188								
PUL53_HSV6U	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	64-80								
PUL60_HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-141								
PUL62_HCMVA	HYPOTHETICAL PROTEIN UL62	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	62-84	178-205							
PUL68_HCMVA	HYPOTHETICAL PROTEIN UL68	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	87-107								
PUL70_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	225-252	409-430	490-514	626-645	770-793				
PUL71_HCMVA	HYPOTHETICAL PROTEIN UL71	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	234-250								
PUL73_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	62-87								
PUL73_HSV8A	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	51-73								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-32								
PUL77_HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	268-291	607-628							
PUL78_HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	71-90	190-205							
PUL79_HCMVA	HYPOTHETICAL PROTEIN UL79	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	40-58								
PUL84_HCMVA	65 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	100-116								
PUL84_HCMVT	65 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	100-116								
PUL87_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	406-422	530-553							
PUL87_HCMVA	HYPOTHETICAL PROTEIN UL87	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	205-231	309-335	606-628	633-653	757-781				
PUL87_HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	301-323	507-529							
PUL87_HSV8A	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	365-387	402-422	579-595						
PUL88_HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	173-191	252-279							
PUL88_HSV6U	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	150-173								
PUL90_HCMVA	HYPOTHETICAL PROTEIN UL90	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-58								
PUL91_HSV6U	HYPOTHETICAL PROTEIN 8R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	43-65								
PUL92_HCMVA	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	76-99								
PUL93_HSV6U	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	36-55	100-119							
PUL94_HCMVA	PROTEIN UL94	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	49-70								
PUL95_EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	301-323								
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	508-526								
PUL95_HSV6U	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	9-30	328-346							
PUL95_HSV8A	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-209								
PUL97_HCMVA	GANCICLOVIR KINASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208-228	541-567							
PUL102_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	168-183								
PUL103_HCMVA	PROTEIN UL103	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-47								
PUL104_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	215-235	423-450							
PUL108_HCMVA	HYPOTHETICAL PROTEIN UL108	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	93-118								
PUL111_HCMVA	HYPOTHETICAL PROTEIN UL111	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-81								
PUL113_HCMVA	HYPOTHETICAL PROTEIN UL113	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	298-319								
PUL117_HCMVA	HYPOTHETICAL PROTEIN UL117	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	178-195								
PUL118_HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-130								
PUL121_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	129-153								

PCGENE FILE NAME	PIRCTLZIP PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PULD3_HCMVA	HYPOTHETICAL PROTEIN UL133	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-22								
PUNO_FOWPI	URACIL-DNA GLYCOSYLASE	FOWLPOX VIRUS (STRAIN FP-1)	12-37								
PUNO_HSVEB	URACIL-DNA GLYCOSYLASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	224-250								
PUNO_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-103								
PUNO_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	82-103								
PUNO_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	82-103								
PUNO_VZVD	URACIL-DNA GLYCOSYLASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	217-243								
PUS03_HSVEB	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	48-63								
PUS03_HSVEK	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	48-63								
PUS03_PRVNI	PROTEIN US3 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	120-136								
PUS03_HCMVA	HQLF1 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	24-39								
PUS05_HSV1I	PUTATIVE GLYCOPROTEIN US5	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	53-70								
PUS05_HSV2	PUTATIVE GLYCOPROTEIN US5	HERPES SIMPLEX VIRUS (TYPE 2)	53-70								
PUS09_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-206								
PUS11_HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	98-113								
PUS13_HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	29-50	113-135	195-222						
PUS13_HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-33	208-231							
PUS14_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	236-260								
PUS15_HCMVA	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	378-402	443-466							
PUS16_HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151-174	243-267							
PUS17_HCMVA	HYPOTHETICAL PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	110-126								
PUS19_HCMVA	MEMBRANE PROTEIN HWLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-142	178-202	214-232						
PUS21_HCMVA	HYPOTHETICAL PROTEIN HWLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-67	155-182							
PUS22_HCMVA	EARLY NUCLEAR PROTEIN HWLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-292								
PUS23_HCMVA	HYPOTHETICAL PROTEIN HRLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	292-310								
PUS24_HCMVA	HYPOTHETICAL PROTEIN HRLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	352-373								
PUS28_HCMVA	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-49	140-160							
PUS28_HCMVT	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	34-49	140-160							
PUS29_HCMVA	HYPOTHETICAL PROTEIN HRLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	246-269								
PUS30_HCMVA	HYPOTHETICAL PROTEIN HRLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102-128	208-233							
PUS33_HCMVA	HYPOTHETICAL PROTEIN HRLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-59								
PV07K_LSV	7 KD PROTEIN	LILY SYMPTOMLESS VIRUS	27-46								
PV07K_NMV	7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	28-49								
PV07K_PVS	7 KD PROTEIN	POTATO VIRUS X (PVX)	31-48								
PV07K_PVX	7 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	31-48								
PV07K_PVXCJ	7 KD PROTEIN	POTATO VIRUS X (STRAIN XC) (STRAIN CP)	31-48								
PV117_ASFL5	L15 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L15S7)	73-94								
PV12I_ASFL5	135 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	59-79								
PV12K_PVMR	12 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	79-96								
PV13K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	24-51								
PV14I_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	79-102	846-863	1013-1037						
PV15K_BSMV	14 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	14-29	80-99							
PV18K_MLVAB	18 KD PROTEIN	ABELSON MURINE LEUKEMIA VIRUS	29-44	128-154							
PV19R_VACCV	PROTEIN B19	VACCINIA VIRUS (STRAIN WR)	114-132	152-172							
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	196-220	752-771							
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	747-767								
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	744-763								
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	775-800								
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	775-800								
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	774-799								
PV1A_PSVI	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	472-493	783-808							
PV1BK_HSVTH	33.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN HJ)	176-191								
PV1BK_PLRVI	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I) (	60-76	192-207							
PV1BK_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	60-76	192-207							
PV1BK_SWYVF	29 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	22-43	136-157							
PV1BK_PEBV	29.6 KD PROTEIN	PEA EARLY BROWNING VIRUS	114-132								
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	283-303	759-777							

PCGENE	P1SCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	296-314								
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	234-255								
PV30K_TRVTC	29 1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	62-82								
PV31K_TOBSV	31 7 KD PROTEIN	TOBACCO STREAK VIRUS (STRAIN WC)	226-250								
PV362_ASFB7	K*362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	145-164								
PV375_ASFL5	L15 375 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L1S37)	114-135								
PV382_ASFL5	L15 382 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L1S37)	114-135								
PV3A_CCMV	COWPEA CHLOROTIC MOTTLE VIRUS		160-187								
PV3A_CMVFN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	214-235								
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	214-235								
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	214-235								
PV3A_CMVQ	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	214-235								
PV3A_CMVY	CUCUMBER MOSAIC VIRUS (STRAIN Y)		214-235								
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	5-28								
PV3A_IBVM	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	5-28								
PV3A_IBVP3	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN PORTUGAL/322/82)	5-28								
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/181/66)	5-28								
PV3A_TAV	3A PROTEIN	TOMATO ASPERMY VIRUS	147-168								
PV58K_BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	320-340								
PV66K_BWYVF	PROTEIN 66	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	97-116								
PV70K_TYMVA	69 KD PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	12-35								
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	44-59								
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-244								
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	217-244								
PVA04_VARV	PROTEIN A4	VARIOLA VIRUS	207-234								
PVA09_VACCC	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-66								
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	41-66								
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-44	140-159	299-317						
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	23-44	141-160	300-318						
PVA14_VACCC	PROTEIN A14	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-62								
PVA14_VARV	PROTEIN A14	VARIOLA VIRUS	39-62								
PVA16_VACCC	PROTEIN A16	VACCINIA VIRUS (STRAIN COPENHAGEN)	341-362								
PVA16_VARV	PROTEIN A16	VARIOLA VIRUS	340-361								
PVA18_VACCC	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	429-447								
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	429-447								
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	429-447								
PVA30_VACCC	PROTEIN A30	VACCINIA VIRUS (STRAIN COPENHAGEN)	107-131	193-209							
PVA30_VARV	PROTEIN A30	VARIOLA VIRUS	107-131	193-209							
PVA33_VARV	PROTEIN A33	VARIOLA VIRUS	58-82								
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	53-76								
PVA38_VARV	PROTEIN A38	VARIOLA VIRUS	53-76								
PVA32_VACCV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	205-230								
PVA32_VARV	PROTEIN A32	VARIOLA VIRUS	175-190								
PVA35_VACCC	PROTEIN A35 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	33-49								
PVA35_VACCV	PROTEIN A35 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	33-49	141-164							
PVA37_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-90								
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	66-90								
PVA40_VACCC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-30								
PVA41_VACCC	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-71								
PVA41_VACCV	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	47-71								
PVA41_VARV	PROTEIN A41 PRECURSOR	VARIOLA VIRUS	47-71								
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-79	201-226							
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	59-79	201-226							
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	59-79	201-226							
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	247-266	384-404							
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	247-266	384-404							
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS	56-75								

PCGENE	PIRCLEIP	All Viruses (No Bacteriophages)									
TITLE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PVAL1_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	55-74								
PVAL1_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	55-74								
PVAL1_BCTV	ALI PROTEIN	BEET CURLY TOP VIRUS	62-108								
PVAL1_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-97								
PVAL1_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-97								
PVAL1_TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	78-97								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	77-97								
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	134-157								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	134-157								
PVAT_CAMVH	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	134-157								
PVAT_CAMVI	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	134-157								
PVAT_CAMVJ	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	134-157								
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	134-157								
PVAT_CEBV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	34-60								
PVAT_FMYD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	141-161								
PVB02_VACCC	PROTEIN B2	VACCINIA VIRUS (STRAIN COPENHAGEN)	132-159								
PVB02_VACCV	PROTEIN B2	VACCINIA VIRUS (STRAIN WR)	155-170								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-170								
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	489-511								
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-511								
PVB05_VACC9	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16M0)	251-271								
PVB05_VACCC	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	251-271								
PVB05_VACCL	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	251-271								
PVB05_VACCV	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	251-271								
PVB06_VACCV	PROTEIN B6	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	58-83								
PVB13_VACCC	PROTEIN B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVB13_VACCV	PROTEIN B13	VACCINIA VIRUS (STRAIN WR)	121-143								
PVB13_VARV	PROTEIN B13	VARIOLA VIRUS	121-143								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	131-143								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)	155-179								
PVBL1_CLVK	BLI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-51								
PVBL1_CLVN	BLI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-51								
PVBL1_SLCV	BLI PROTEIN	SQUASH LEAF CURL VIRUS	245-268								
PVBR1_ABMVW	BR1 PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	146-191								
PVBR1_BGMV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	146-191								
PVBR1_PYMVV	BR1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	146-191								
PVBR1_SLCV	BR1 PROTEIN	SQUASH LEAF CURL VIRUS	193-218								
PVC01_VACCC	PROTEIN C1	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-90								
PVC01_VACCV	PROTEIN C1	VACCINIA VIRUS (STRAIN WR)	75-95								
PVC01_VARV	PROTEIN C1	VARIOLA VIRUS	58-78								
PVC02_SFVKA	HYPOTHETICAL PROTEIN C2	SHOPE FIBROMA VIRUS (STRAIN KASZA)	8-31								
PVC04_VACCC	C-PROTEIN COUPLED RECEPTOR HOMOLOG C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	96-123	179-197							
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	183-209								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	183-209								
PVC06_SFVKA	HYPOTHETICAL PROTEIN C6	SHOPE FIBROMA VIRUS (STRAIN KASZA)	20-47								
PVC09_VACCC	PROTEIN C9	SHOPE FIBROMA VIRUS (STRAIN KASZA)	14-30								
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-59								
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	40-59								
PVC10_VACCC	PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	83-109								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-64								
PVC10_VARV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	42-64								
PVC10_VACCC	PROTEIN C16/C22	VARIOLA VIRUS	42-64								
PVC11_VACCC	PROTEIN C11/B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-68								
PVC11_VACCC	PROTEIN C11/A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	101-126								
PVCAP_EBV	MAJOR CAPSID PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-28								
		EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-172	366-381	1072-1093						

PCGENE	PIRCLIP	All Viruses (No Bacteriophage)										
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	668-684	841-860	871-891							
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	333-302	338-384	1137-1152							
PVCAP_HSV1B	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	337-383	872-890								
PVCAP_HSV1A	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	144-168	269-287	353-372	1063-1089						
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	335-362									
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	381-401	881-910	1136-1176							
PVCAP_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	60-81									
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-39									
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-39									
PVD01_VARV	PROTEIN D1	VARIOLA VIRUS	12-39									
PVD01_FOWP1	91.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	12-39									
PVD01_SPVEA	PROTEIN D1	SHOPE FIBROMA VIRUS (STRAIN KASZA)	346-365	1113-1137								
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	34-78	171-196								
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	328-340	664-714	715-734							
PVD01_VARV	PROTEIN D1	VARIOLA VIRUS	328-340	664-714	715-734							
PVD8P_CAMVC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	328-340	694-714	715-734							
PVD8P_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DAH)	37-56									
PVD8P_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D8C)	37-56									
PVD8P_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	37-56									
PVD8P_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	37-56									
PVE01_VACCC	PROTEIN E1	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-97	335-380	540-558							
PVE01_VACCV	PROTEIN E1	VACCINIA VIRUS (STRAIN WR)	76-97	335-380	540-558							
PVE01_VARV	PROTEIN E1	VARIOLA VIRUS	76-97	335-380	540-558							
PVE05_VACCC	PROTEIN E5	VACCINIA VIRUS (STRAIN COPENHAGEN)	314-339									
PVE05_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN DAIREN 1)	324-339									
PVE05_VACCV	PROTEIN E5	VACCINIA VIRUS (STRAIN WR)	324-339									
PVE05_VARV	PROTEIN E5	VARIOLA VIRUS	324-339									
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	430-451									
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	430-451									
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	430-451									
PVE06_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	231-267	430-451								
PVE06_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	234-270									
PVE8_VARV	PROTEIN E8	VARIOLA VIRUS	234-270									
PVE11_NPV1G	PROBABLE E1 PROTEIN 2	HUMAN PAPILLOMAVIRUS TYPE 16	234-270									
PVE11_NPVAC	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	167-183									
PVE1_BPV2	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	106-133									
PVE1_BPV2	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 2	285-287	517-535								
PVE1_CRPVK	E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	265-281	516-532								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	7-22									
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	258-275	311-334								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	308-324									
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	264-281	317-333	344-364							
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	317-334									
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	218-260									
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	334-354									
PVE1_HPV43	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 43	161-180									
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	304-320									
PVE1_HPV60	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 60	218-260									
PVE1_HPV1	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	218-275	311-334								
PVE1_HPV1	E1 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	357-374	110-126								
PVE1_CRPVK	PROBABLE E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	288-309									
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	108-333									
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	285-310									
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	293-320									
PVE1_HPV1A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	288-306									
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	286-309									
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	311-328									
			294-312									

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVE3_HPV33	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	275-293								
PVE3_HPV35	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	289-307								
PVE3_HPV39	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	292-310								
PVE3_HPV42	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	321-338								
PVE3_HPV57	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	303-320								
PVE3_HPV68	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	286-311								
PVE3_PAPVD	PROBABLE E3 PROTEIN	DEER PAPILLOMAVIRUS	333-351								
PVE3_PCPV1	E3 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	294-320								
PVE3_RHPV1	E3 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	294-318								
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	39-59								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	56-76								
PVE4_HPV51	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	59-83								
PVE4_RHPV1	PROBABLE E4 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	63-87								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-42								
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	19-42								
PVE5_BPV1	E5 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1, AND TYPE 2	2-26								
PVE5_HPV13	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	19-42								
PVE5_HPV31	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	31-52								
PVE5_HPV42	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	45-65								
PVE5_HPV51	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	31-52								
PVE5_HPV58	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	89-113								
PVE5_RHPV1	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	109-132								
PVE6_BPV1	E6 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	23-41								
PVE6_CRPVK	E6 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	6-23								
PVE6_HPV08	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	133-151								
PVE6_HPV2A	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	8-27								
PVE6_HPV33	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	9-26								
PVE6_HPV35	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	9-26								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	9-26								
PVE6_HPV57	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	8-27								
PVE6_HPV58	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	9-26								
PVE6_MMPV	E6 PROTEIN	MICROMYS MINUTUS PAPILLOMAVIRUS	7-33	36-60							
PVE7_CRPVK	E7 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	71-88								
PVE7_HPV13	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	77-93								
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-87								
PVE7_HPV6B	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	36-57								
PVE7_RHPV1	E7 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	79-105								
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	78-99	203-222							
PVEF_GVFN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	154-175	237-260	677-696						
PVENV_BEV	ENVELOPE PROTEIN	BERNE VIRUS	62-86	87-114							
PVENV_DHVII	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61)	42-57	484-511							
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	25-41								
PVENV_LELV	PROBABLE ENVELOPE PROTEIN	LELYSTAD VIRUS	27-47	148-168							
PVENV_MCV1	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1	61-80								
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2	61-80	308-333							
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	196-221	356-383	473-491						
PVETM_NPVAC	ECORI-T SITE PROTEIN ETM	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	82-105								
PVF05_VACCC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	280-305								
PVF05_VACCP	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	280-305								
PVF05_VACCV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	281-306								
PVF05_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	280-305								
PVF09_VACCC	PROTEIN F9	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	176-200								
PVF09_VACCV	PROTEIN F9	VACCINIA VIRUS (STRAIN WR)	176-200								
PVF09_VARV	PROTEIN F9	VARIOLA VIRUS	176-200								
PVF11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	181-184								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	181-184								
PVF15_VACCC	PROTEIN F15	VACCINIA VIRUS (STRAIN COPENHAGEN)	25-48								

BAD ORIGINAL

FCGENE	FUNCTION	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVF15_VACCP	PROTEIN F15	VACCINIA VIRUS (STRAIN L-IVP)	1-26	----	----	-	----	----	----	----	----
PVF15_VAAV	PROTEIN F15	VARIOLA VIRUS	1-31	----	----	-	----	----	----	----	----
PVF11_FOWPV	PROTEIN F11	FOWLPOX VIRUS	297-333	----	----	----	----	----	----	----	----
PVF13_FOWPV	PROTEIN F13	FOWLPOX VIRUS	88-104	----	----	----	----	----	----	----	----
PVF17_CAJVK	PROTEIN F7	CAPRIPOXVIRUS (STRAIN KS-1)	89-111	----	----	----	----	----	----	----	----
PVF14_FOWPV	PROTEIN F14	FOWLPOX VIRUS	65-90	----	----	----	----	----	----	----	----
PVF14_CAJVK	CF1A PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	51-76	----	----	----	----	----	----	----	----
PVFUS_ORFNZ	18 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	29-48	----	----	----	----	----	----	----	----
PVFUS_VACCA	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR 65-16)	72-94	----	----	----	----	----	----	----	----
PVG01_HSV11	HYPOTHETICAL GENE 1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	169-195								
PVG01_HSV11	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1	210-225	317-339	389-416						
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	298-318	376-395							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	237-257	315-334							
PVG01_VAAV	PROTEIN G1	VARIOLA VIRUS	298-318	376-395							
PVG01_VZVD	HYPOTHETICAL GENE 1 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	51-82	----	----	----	----	----	----	----	----
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-72								
PVG01_VAAV	PROTEIN G1	VARIOLA VIRUS	58-72								
PVG04_VACCC	PROTEIN G4	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-33								
PVG04_VAAV	PROTEIN G4	VARIOLA VIRUS	111-33								
PVG04_VACCC	PROTEIN G4	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-31								
PVG04_VAAV	PROTEIN G4	VARIOLA VIRUS	111-31								
PVG08_HSV11	HYPOTHETICAL GENE 8 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	134-169	159-185							
PVG10_HSV11	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	35-54								
PVG10_HSV5A	HERPESVIRUS SAIMIRI (STRAIN 11)	HERPESVIRUS SAIMIRI (STRAIN 11)	109-124	155-179							
PVG11_HSV11	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	103-122	156-176							
PVG11_HSV5A	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	151-170	210-230							
PVG13_HSV11	HYPOTHETICAL GENE 13 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-92								
PVG19_HSV11	HYPOTHETICAL GENE 19 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	88-112								
PVG1_AMEPV	GIL PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	313-336								
PVG1_SPV1R	CAPSID PROTEIN	SPHEROPLASMA VIRUS SPV1-RIA1 B	76-92	659-678							
PVG22_HSV11	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	300-317								
PVG23_HSV11	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1	314-335								
PVG27_HSV11	HYPOTHETICAL GENE 27 PROTEIN	ICTALURID HERPESVIRUS 1	158-184								
PVG27_HSV5A	HYPOTHETICAL GENE 27 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	209-226								
PVG28_HSV11	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	173-197	401-518							
PVG28_HSV5A	HYPOTHETICAL GENE 28 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	14-40								
PVG29_HSV11	HYPOTHETICAL GENE 29 PROTEIN	ICTALURID HERPESVIRUS 1	10-42								
PVG30_HSV11	HYPOTHETICAL GENE 30 PROTEIN	ICTALURID HERPESVIRUS 1	146-191								
PVG31_VZVD	GENE 31 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	90-109								
PVG36_HSV5A	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	106-133	344-362							
PVG37_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	284-299								
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	648-671	970-990	1018-1045						
PVG40_HSV11	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1	14-32								
PVG41_HSV11	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1	11-31	62-81	244-260						
PVG44_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	109-133	137-178	322-345	521-538					
PVG48_HSV11	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1	134-154	580-607	937-963	1244-1270					
PVG50_HSV5A	PROB TRANSCRIPTION ACTIVATOR EDRF 1	HERPESVIRUS SAIMIRI (STRAIN 11)	71-91								
PVG51_HSV11	HYP GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	5-30	58-83							
PVG53_HSV11	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1	29-49	84-102							
PVG55_HSV11	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1	228-253								
PVG55_HSV5A	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	22-37	143-158	288-309						
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	83-106								
PVG58_HSV5A	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	1155-1176								
PVG59_HSV11	HYP GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	130-146	266-288	293-319	330-346					
PVG5_SPV4	GENE 5 PROTEIN	SPHEROPLASMA VIRUS 4	142-161	267-289							
PVG60_HSV11	HYPOTHETICAL GENE 60 PROTEIN	ICTALURID HERPESVIRUS 1	42-64								
			98-11	33-51							

BAD ORIGINAL

PCGENE	FIRCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVG61_HSVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1	76-102	117-136							
PVG63_HSVII	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	238-259	336-363							
PVG64_HSVII	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	420-445								
PVG65_HSVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	117-137	155-173	362-378	518-533	1147-1174	1347-1369			
PVG67_HSVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	108-132	171-188	318-344	722-745	1005-1029	1072-1091	1315-1341		
PVG6_SPVIR	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	60-82								
PVG70_HSVII	HYPOTHETICAL GENE 70 PROTEIN	ICTALURID HERPESVIRUS 1	184-209								
PVG71_HSVSA	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	89-105								
PVG73_HSVII	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1	445-471	535-561	720-744	1252-1269					
PVG74_HSVSA	G-PROTEIN COUPLED REC HOMOLOG ECRF3	HERPESVIRUS SAIMIRI (STRAIN 11)	124-151								
PVG9_SPVIR	GENE 9 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	57-72								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1587-1606	1856-1877	2108-2127	2210-2226	2788-2806	2973-2999	3073-3090	3120-3145	3374-3399
			3601-3625								
PVGH0_HCMVA	GLYCOPROTEIN H301 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	157-178								
PVGL1_CVPR8	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004/BRITISH IS	174-193								
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	123-139	174-190	264-279	651-674	991-1017	1259-1280			
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	31-47	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	768-794	1053-1071	1115-1134						
PVGL2_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	95-111	999-1025	1267-1290	1317-1338					
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	95-111	947-973	1215-1238	1265-1286					
PVGL2_CVMUC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	95-111	999-1025	1267-1290	1317-1338					
PVGL2_CVMUH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	95-111	858-884	1126-1149	1176-1197					
PVGL2_CVPF8	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	800-816	1038-1064	1274-1297				
PVGL2_CVPM2	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	506-521	800-816	1038-1064	1274-1297			
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_CVPR8	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH I	218-233	576-592	814-840	1050-1073					
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	218-233	576-592	814-840	1050-1073					
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL3_FIPV	E3 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	803-819	1041-1067	1277-1300						
PVGL3_IBV6	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	196-219	588-607	771-797	1056-1081	1094-1111				
PVGL3_IBVB	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	195-218	587-606	770-796	1055-1080					
PVGL3_IBVD2	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274) (	196-219	588-607	771-797	1056-1081					
PVGL3_IBVD3	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D3896)	196-219								
PVGL3_IBVK	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	195-218	587-606	770-796	1055-1080					
PVGL3_IBVM	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	195-218	378-398	587-606	770-796	1055-1080				
PVGL3_IBVU1	E3 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/123/82)	178-201								
PVGL3_IBVU2	E3 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/142/86)	178-201								
PVGL3_IBVU3	E3 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/167/84)	178-201								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	732-752								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-558	706-732	750-777						
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	536-559	707-733	751-778						
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-104								
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	82-103								
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	82-103								
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	83-104								
PVGLB_HSV23	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	79-99								
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	79-99								
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAB)	65-85								
PVGLB_HSV6U	GLYCOPROTEIN B (FRAGMENT)	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-92	117-144							
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	560-578	689-707							
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV) (BOVINE MAMMILLITIS	279-299	745-767							
PVGLB_HSVBC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	692-710								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLB_HSV81	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A) (EHV-1)	736-753								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	675-692								
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	736-753								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	736-753								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	736-753								
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	589-613								
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	483-506	584-602	701-716						
PVGLB_ILTV6	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 632)	256-275	597-621	740-758						
PVGLB_ILTV8	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2)	266-285	607-631	750-768						
PVGLB_ILTVT	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	266-285	607-631	750-768						
PVGLB_MCMV8	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-156	566-589	738-765						
PVGLB_PRVIF	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	203-218								
PVGLB_VZVD	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	522-538								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	3-22	467-493							
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	3-22	467-493							
PVGLC_HSV2	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	435-458								
PVGLC_HSV23	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	436-459								
PVGLC_HSVBC	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-494								
PVGLC_HSVE4	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	444-459								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KENTUCK	427-442								
PVGLC_HSVMB	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	399-421								
PVGLC_HSVMD	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	399-421								
PVGLC_HSVMG	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	398-420								
PVGLC_HSVMM	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	399-421								
PVGLC_PRVIF	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	180-197	446-472							
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	431-449								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	431-449								
PVGLD_HSV11	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17), AND (TYPE 1 / STRAIN	79-94								
PVGLD_HSV2	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	79-94								
PVGLE_HSV11	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	104-129	413-437							
PVGLE_VZVD	GLYCOPROTEIN E PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	469-493								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	205-221	265-287	482-504						
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	205-221	265-280	484-506						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	205-221	265-280	484-506						
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	336-361	398-414	562-589						
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18S	205-221	265-280	484-506						
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	205-221	265-280	484-506						
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LO	205-221	265-280	484-506						
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	205-221	265-280	484-506						
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)and (STRAIN HALLE)	224-245	286-302	451-477						
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-J-CA)	227-248	289-305	454-480						
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-245	286-302	451-477						
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-20	276-292	446-467						
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	276-292	446-467							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	276-292	446-467							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-20	276-292	446-467						
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	273-289								
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	273-289								
PVGLF_NDVHO	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	273-289								
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	273-289								
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	273-289								
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	273-289								
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	273-289								
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	273-289								
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	273-289								
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	273-289								
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	269-285	305-326	367-383	531-558					

PCGENE	P1PCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_PI1HC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-477								
PVGLF_PI1H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	450-471								
PVGLF_PI2H0	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	450-471								
PVGLF_PI2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIMA)	450-471								
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	405-426	453-474							
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	2-20	283-310	453-474						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	220-241	282-298	447-473						
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	220-241	282-298	447-473						
PVGLF_SEND3	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-481								
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-481								
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-481								
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-481								
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-481								
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	453-474								
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	401-425	446-467							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	175-191	452-474							
PVGLG_IHNV	SPIKE GLYCOPROTEIN PRECURSOR	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	77-99								
PVGLG_RABVE	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN ERA)	454-474								
PVGLG_RABVH	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN HEP-FLURY)	372-391	454-474							
PVGLG_RABVP	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN PV)	454-474								
PVGLG_RABVS	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN SAD B19)	454-474								
PVGLG_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	454-474								
PVGLG_TRTV	MAJOR SURFACE GLYCOPROTEIN G	TURKEY RHINOTRACHEITIS VIRUS	199-216								
PVGLG_VHSV0	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	406-428								
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	211-237	365-382	574-598	691-712					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	210-236	364-381	573-597	690-711					
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	245-262	443-467	803-827						
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	245-262	443-467	803-827						
PVGLH_HSV2G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G5)	314-332								
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	304-325	814-839							
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)and (ISOLATE HVS25A)	297-318	807-832							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	454-479	658-679							
PVGLH_MCMVS	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	670-690								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-180								
PVGLI_HSV11	GLYCOPROTEIN I	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	43-60								
PVGLI_HSVEB	GLYCOPROTEIN I PRECURSOR	EQUINE HERPESVIRUS TYPE 1	44-63								
PVGLI_VZVD	GLYCOPROTEIN I	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	278-297								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	117-136	197-222							
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	31-55	81-98	190-211	1325-1345	1387-1410				
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	31-55	81-98	190-211	1325-1345	1387-1410				
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	193-218	1379-1404							
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS									
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	355-371	692-717	900-915	999-1019					
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	499-515	694-718	1000-1020						
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	499-515	694-719	1001-1021						
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	499-515	694-719	1001-1021						
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	18-44	269-293	348-367	531-551	815-841				
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	152-171								
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	743-765	997-1016	1275-1302						
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	155-174	509-525	712-729						
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	155-174	509-525	712-729	1092-1117					
PVGLM_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS	53-80	344-368	830-856						
PVGLM_RVFVZ	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	53-80	344-368	830-856	1156-1176					
PVGLM_SEOUH	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	355-371	692-717	900-915	999-1019					
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	355-371	693-718	901-916	1000-1020					
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11) (SAPPORO RAT VIRUS)	355-371	692-717	900-915	999-1019					
PVGLM_UUK	M POLYPROTEIN PRECURSOR	UUKUNIEMI VIRUS	561-585	655-674	826-842	925-952	966-989				

PCGENE	P1ICTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	430-452	869-885	1099-1124	1546-1568					
PVGLX_HSVEB	GLYCOPROTEIN X PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)									
PVGLX_HSVEK	GLYCOPROTEIN GX PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)									
PVGLX_HSVEL	GLYCOPROTEIN GX	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)									
PVGLX_PRVRJ	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN RICE)	149-176								
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	12-38								
PVGLY_LASSO	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	12-38	237-258	426-448						
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	12-35	238-259	427-449						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	12-35								
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	12-35	89-108							
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	12-35	425-447							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-38	441-466							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-38								
PVGLY_TACVS	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN VS)	12-38								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-38								
PVGN3_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	141-161	569-594	757-783	1110-1135	1165-1184				
PVGN4_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS	311-335	741-764							
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	657-681								
PVGP3_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	854-878								
PVGP8_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-88								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	34-52	537-561	653-675						
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	538-562	607-627							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	538-562	607-627							
PVH01_VACCC	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-92	105-121							
PVH01_VACCV	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN WR)	76-92	105-121							
PVH01_VARV	PROTEIN-TYROSINE PHOSPHATASE	VARIOLA VIRUS	76-92	105-121							
PVH07_VACCV	LATE PROTEIN H7	VACCINIA VIRUS (STRAIN WR)	70-97								
PVH07_VARV	LATE PROTEIN H7	VARIOLA VIRUS	70-97								
PVHEL_FXMV	PROBABLE HELICASE	FOXTAIL MOSAIC VIRUS	182-205								
PVHEL_PMV	PROBABLE HELICASE	PAPAYA MOSAIC POTEXVIRUS	153-168								
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	120-135								
PVI01_VARV	PROTEIN I1	VARIOLA VIRUS	120-135								
PVI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	194-220								
PVI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	194-220								
PVI03_VARV	PROTEIN I3	VARIOLA VIRUS	194-220								
PVI06_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	106-128	133-155							
PVI06_VARV	PROTEIN I6	VARIOLA VIRUS	106-128	133-155							
PVI07_VACCC	PROTEIN I7	VACCINIA VIRUS (STRAIN COPENHAGEN)	13-34	344-367							
PVI07_VACCV	PROTEIN I7	VACCINIA VIRUS (STRAIN WR)	13-34	344-367							
PVI07_VARV	PROTEIN I7	VARIOLA VIRUS	13-34	344-367							
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	196-212	418-438							
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	196-212	418-438							
PVI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	196-212	418-438							
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-100	333-350							
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	77-100	333-350							
PVIE2_HCMVA	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	14-32	389-406							
PVIE2_HCMVT	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32	388-405							
PVIE2_MCMVS	IMMEDIATE-EARLY PROTEIN 2	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	251-272								
PVIE3_HCMVT	30 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32								
PVIEO_HSVSA	IMMEDIATE-EARLY PROTEIN IE-0	HERPESVIRUS SAIMIRI (STRAIN 11)	65-80								
PVIEN_NPVAC	IMMEDIATE-EARLY REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	100-116	273-290							
PVIMP_EBV	PROB INTEGRAL MEMBRANE PROTEIN BBRF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	75-100	125-152	203-222						
PVIMP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-89	190-217							
PVIMP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-110	250-270							
PVIMP_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	24-49	93-120	145-172	247-263	301-321	332-358			
PVIMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-101	313-331							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMP_VZVD	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	21-47	154-181	230-252						
PVM01_VACCC	PROTEIN M1	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-110								
PVM01_VACCV	PROTEIN M1	VACCINIA VIRUS (STRAIN WR)	89-110								
PVM01_VARV	PROTEIN M1	VARIOLA VIRUS	89-110								
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-113	208-234	319-337						
PVK04_VACCV	PROTEIN K4	VACCINIA VIRUS (STRAIN WR)	87-113	208-234	319-337						
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	106-133								
PVL02_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-61								
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-61								
PVL02_VARV	PROTEIN L2	VARIOLA VIRUS	39-61								
PVL03_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	148-164	186-208	292-315						
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	148-164	186-208	292-315						
PVL03_VARV	PROTEIN L3	VARIOLA VIRUS	147-163	185-207	291-314						
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	16-39								
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-39								
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	299-317								
PVL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	28-55								
PVL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	38-63								
PVL1_REOVD	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	327-346	351-366	752-774						
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	254-270								
PVL2_HPV11	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	32-58								
PVL2_HPV13	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	33-59								
PVL2_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	34-60								
PVL2_HPV18	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	33-59								
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	213-228								
PVL2_HPV2A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	88-114								
PVL2_HPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	34-60	443-462							
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-59	99-114							
PVL2_HPV35	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	34-60								
PVL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	39-58	414-436							
PVL2_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	33-59	344-370							
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	250-265								
PVL2_HPV57	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	32-58								
PVL2_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-59	99-114							
PVL2_HPV6B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	33-59								
PVL2_PAPVE	PROBABLE L2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	30-56								
PVL2_RHPV1	PROBABLE L2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	45-71								
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	6-28								
PVL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING	714-737								
PVL3_REOVJ	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	714-737	1213-1236							
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	714-737								
PVL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-170	196-220	686-711	845-861					
PVM01_VACCC	PROTEIN M1	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-159	177-195	281-302						
PVM01_VACCV	PROTEIN M1	VACCINIA VIRUS (STRAIN WR)	83-108	126-144	230-251						
PVM01_VARV	PROTEIN M1	VARIOLA VIRUS	81-106	124-142	228-249						
PVMI_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING)	141-168	227-245	280-304	324-347	414-436	454-477			
PVMI_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	141-168	227-245	280-304	414-436	454-477				
PVM21_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192								
PVM22_REOVD	MAJOR VIRION STRUCT PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192								
PVM2_REOVJ	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	168-192								
PVM2_REOVL	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-192								
PVM3_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	304-326	521-540							
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	37-62								
PVMAT_CDVD	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	148-165	283-309							
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	44-62	139-160							
PVMAT_LPMV	MATRIX PROTEIN	LA PIEDAD-MICHOACAN-MEXICO VIRUS	311-338								
PVMAT_MEASE	MATRIX PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	283-309								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophage)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMAT_MEASH	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HALLE)	283-309								
PVMAT_MEASI	MATRIX PROTEIN	MEASLES VIRUS (STRAIN IP-3-CA)	87-111								
PVMAT_MEASU	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HU2)	283-309								
PVMAT_MUMP1	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	191-207	227-250	310-330						
PVMAT_MUMPS	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL)	191-207	227-250	310-330						
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	135-151	190-208	309-329						
PVMAT_NDVB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	135-151	190-208	309-329						
PVMAT_PIHC	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	195-217								
PVMAT_PIHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	132-154	189-205	308-328						
PVMAT_PI4HA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	312-332								
PVMAT_PI4HB	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	312-332								
PVMAT_RINDK	MATRIX PROTEIN	RINDERPEST VIRUS (STRAIN KABETE O)	200-221	239-260	283-309						
PVMAT_SENDF	MATRIX PROTEIN	SENDAI VIRUS (STRAIN FUSHIMI)	195-217								
PVMAT_SENDH	MATRIX PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	195-217								
PVMAT_SEND2	MATRIX PROTEIN	SENDAI VIRUS (STRAIN Z)	195-217								
PVMAT_SSPVB	MATRIX PROTEIN	SUBACUTE SCLEROSING PANENCEPHALITIS VIRUS (STRAIN BIKEN)	283-309	314-338							
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	132-154	189-205	308-328						
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN WJ)	98-114	132-148	308-335						
PVMAT_SVCV	MATRIX PROTEIN	SPRING VIREMIA OF CARP VIRUS (RHABDOVIRUS CARPIA)	141-167								
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS	122-143								
PVMEI_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	9-36	137-161	171-190						
PVMEI_CVH22	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN 229E)	136-155								
PVMEI_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	9-36	64-85	137-161						
PVMEI_CVMA5	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	10-37								
PVMEI_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	10-37								
PVMEI_CVPFS	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	174-193								
PVMEI_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	169-193	174-193							
PVMEI_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	174-193								
PVMEI_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	9-36	137-161	171-190						
PVMEI_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	74-98								
PVMEI_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	74-101								
PVMEI_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42)	74-101								
PVMEI_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	74-98								
PVMEM_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	131-157	178-203							
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	118-134	147-164	183-201						
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	118-134	147-164	183-201						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	118-134	147-164	183-201						
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	118-134	147-164	183-201						
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	118-134	147-164	183-201						
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	118-134	147-164	183-201						
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	293-318								
PVMP_FMVD	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	115-131	180-198							
PVMP_SCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-147	273-299							
PVMSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	201-228	269-295							
PVMSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	194-221	268-294							
PVMSA_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	157-184	231-257							
PVMSA_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	194-221	269-295							
PVMSA_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	209-236	271-295	380-395						
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	236-262	293-320							
PVMSA_HPBV0	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	11-28	70-96							
PVMSA_HPBV2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	185-202	244-270							
PVMSA_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	185-202	244-270							
PVMSA_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-270								
PVMSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	174-191	233-259							
PVMSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	11-28	70-96							
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-259								
PVMSA_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	174-191	233-259							

PCGENE	P1ICTL2IP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMSA_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE	174-191	233-259							
PVMSA_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADR / STRAIN NC-1)	11-28	70-96							
PVMSA_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	174-191	233-259							
PVMSA_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	185-202	244-270							
PVMSA_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	185-202	244-270							
PVMSA_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	11-28	70-96							
PVMSA_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	174-191	233-259							
PVMSA_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	174-191	233-259							
PVMSA_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	174-191	233-259							
PVMSA_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS I	207-234	269-293	378-393						
PVMSA_WHV39	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 39	212-239	274-298	383-398						
PVMSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-239	274-298	383-398						
PVMSA_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-239	274-298	383-398						
PVMSA_WHV8I	PROB MAJOR SURFACE ANTIGEN PREC	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	212-239	274-298	383-398						
PVMSA_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS23)	125-149	234-249							
PVMT2_IAANN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	25-46								
PVMT2_IABAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	25-46								
PVMT2_IAFOW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	25-46								
PVMT2_IAFPR	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	25-46								
PVMT2_IAFPW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	25-46								
PVMT2_IALE1	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	25-46								
PVMT2_IALE2	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	25-46								
PVMT2_IAMAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	25-46								
PVMT2_IAPUE	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	25-46								
PVMT2_IASIN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	25-46								
PVMT2_IAUDO	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	25-46								
PVMT2_IAWIL	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	25-46								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	226-241								
PVN34_ROTBS	NONSTRUCTURAL PROTEIN NS34	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	334-351								
PVNBP_PVSP	10 7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	21-36								
PVNB_INBBE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	13-39								
PVNB_INBHK	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	13-39								
PVNB_INBLE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	13-39								
PVNB_INBLN	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	13-39								
PVNB_INBMD	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	13-39								
PVNB_INBMF	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/1/89)	13-39								
PVNB_INBOR	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	13-39								
PVNCS_ADVG	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	81-96	169-190							
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002) (AEDES DENS	675-690								
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	575-597								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	140-165								
PVNS1_AHSV4	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	256-272								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	31-50	114-137	167-192						
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	31-50	114-137	167-192						
PVNS1_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	10-38								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	31-50	114-137	167-192						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-50	167-192							
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	28-47	164-189							
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	31-50	167-192							
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	28-47	164-189							
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	28-47	164-189							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	31-50	114-137	167-192						
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND(STRAIN A/	31-50	114-137	167-192						
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	31-50	167-192							
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	31-50	114-137	167-192						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	31-50	114-137	167-192						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	31-50	167-192							

PCGENE	P12CTL2IP	All Viruses (No Bacteriophages)									
ITLE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	31-50	167-192							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	31-50	167-192							
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MYNAH/HANEDA-THAI/76)	28-47	164-189							
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	167-192								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	31-50	167-192							
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	31-50	167-192							
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	31-50	167-192							
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	31-50	114-137	167-192						
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/	31-50	167-192							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	31-50	167-192							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	31-50								
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	28-47	164-189							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	31-50	167-192							
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	31-50	114-137	167-192						
PVNS1_IAUS5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	31-50	114-137	167-192						
PVNS1_IAZI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	31-50	167-192							
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-248								
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-248								
PVNS2_BTV10	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV17	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV1S	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	145-161								
PVNS2_BTV1X	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	145-161								
PVNS2_EHDV2	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AL	145-161								
PVNS2_IAPUE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-28								
PVNS2_IATR5	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	56-80								
PVNS2_PVM	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	52-68								
PVNS3_CVPFS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	177-201								
PVNS3_CVPPU	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	98-122								
PVNS3_CVPRM	NONSTRUCTURAL PROTEIN 3-1	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	177-201								
PVNS3_RSV	NONSTRUCTURAL PROTEIN NS3	RICE STRIPE VIRUS	16-40								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	84-100								
PVNS4_CVM5	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-38								
PVNS4_CVPFS	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	4-31								
PVNS4_MSTV	NONSTRUCTURAL PROTEIN NS4	MAIZE STRIPE VIRUS	41-56								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	41-56	60-82	152-167						
PVNS7_CVFEI	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	59-84								
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	59-84								
PVNSC_PI1HB	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	76-92								
PVNSC_PI1HC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	76-92								
PVNSC_PI1HD	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	76-92	179-197							
PVNSC_PI1HE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	76-92								
PVNST_CVBQ	32 KD NONSTRUCTURAL PROTEIN	BOVINE CORONAVIRUS (STRAIN QUEBEC)	88-109								
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-248								
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-248								
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-248								
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-248								
PVNST_PTPV	NONSTRUCTURAL PROTEIN NS-S	PUNTA TORO PHLEBOVIRUS	48-63								
PVNST_SFSV	NONSTRUCTURAL PROTEIN NS-S	SANDFLY FEVER SICILIAN VIRUS	16-34								
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS	52-73	89-104							
PVNUA_PRVKA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	756-777	1563-1583							
PVNUC_DHVII	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61)	123-139	297-324							
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	159-176								
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	173-197	266-287							
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	173-197								
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	173-197								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	173-197								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	173-197								
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	173-197								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	173-197								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80	173-197								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	173-197								
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	173-197								
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	173-197								
PVNUC_IADE3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	173-197								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/1/75)	173-197								
PVNUC_IADM2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	173-197								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	173-197								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	173-197								
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	173-197								
PVNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1955)	173-197								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	173-197								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	173-197								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTC	173-197								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	173-197								
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	173-197								
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	173-197								
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	173-197								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	173-197								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	173-197								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	173-197								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	173-197								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	173-197								
PVNUC_IAHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	173-197								
PVNUC_IAHI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	173-197								
PVNUC_IAHL0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	173-197								
PVNUC_IAHM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	173-197								
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	173-197								
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/3/83)	173-197								
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	173-197								
PVNUC_IAHT8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	173-197								
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	173-197								
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	173-197								
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	173-197								
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	173-197								
PVNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	173-197								
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	173-197								
PVNUC_IAOH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	173-197								
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	173-197								
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	173-197								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/	173-197								
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	173-197								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	173-197								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	173-197								
PVNUC_IATE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	173-197								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	173-197								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	173-197								
PVNUC_IATR5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	173-197								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	173-197								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	173-197								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	173-197								
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	173-197								
PVNUC_IAVN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	173-197								

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	173-197								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/1976)	173-197								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	173-197								
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	173-197								
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	173-197								
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	173-197								
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	173-197								
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	173-197								
PVNUC_IAZHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	173-197								
PVNUC_IAZHJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	173-197								
PVNUC_IAZII	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	173-197								
PVNUC_IAZIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	173-197								
PVNUC_IAZIJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	173-197								
PVNUC_IAZIM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/119/89)	173-197								
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	173-197								
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	173-197								
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	173-197								
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	173-197								
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	173-197								
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	173-197								
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	234-258								
PVNUC_INBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	234-258								
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	234-258								
PVNUC_INBSI	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	234-258								
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-39	141-158							
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-39	141-158							
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	189-204	242-262	336-358						
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	189-204	242-262	336-358						
PVOR1_FXMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	846-865								
PVOR1_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	409-424	990-1010							
PVOR1_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	87-104	986-1009	1251-1270	1893-1909					
PVOR1_PVSP	223 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	279-295								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	128-153	234-256	306-322	1010-1030					
PVOR1_PVXCP	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	128-153	234-256	306-322	385-404	1010-1030				
PVOR1_PVXXJ	165 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	128-153	234-256	306-322	1010-1030					
PVOR1_SMYEA	150 KD PROTEIN	OS STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	121-146	155-175							
PVOR1_WCMVM	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	121-146								
PVOR1_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	121-146	408-430							
PVP03_HSV5A	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	424-446	462-486	551-575	579-595	1051-1072				
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-26	42-59							
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	4-31								
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	35-58								
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS	31-49	52-77	105-129	195-214	260-283	504-528			
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	90-107	265-291							
PVP14_EBV	PROBABLE MEMBRANE ANTIGEN P140	EPSTEIN-BARR VIRUS (STRAIN B95-8)	694-715	857-879	1124-1145						
PVP19_EBV	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	EPSTEIN-BARR VIRUS (STRAIN B95-8)		346-364							
PVP19_HCMVA	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-101	122-149	200-216						
PVP19_HSV5A	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HERPESVIRUS SAIMIRI (STRAIN 11)	238-265								
PVP19_VZVD	CAPSID ASSEMBLY AND DNA MATUR PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	5-31								
PVP1_SSV1	STRUCTURAL PROTEIN VP1 PRECURSOR	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	8-35								
PVP21_ARCV	CORE PROTEIN P21	ARTICHOKE MOTTLED CRINKLE VIRUS	37-63								
PVP21_CNV	CORE PROTEIN P21	CUCUMBER NECROSIS VIRUS	40-65								
PVP21_CRV	CORE PROTEIN P21	CYMBIDIUM RINGSPOT VIRUS	40-63								
PVP21_TBSVC	CORE PROTEIN P21	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	40-63								
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-165	187-202	261-282						
PVP23_HSV11	CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	197-220								
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	206-232								

PCGENE	P12CTL21P	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-132								
PVP26_NPVAC	P26 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	12-31	58-76	117-141						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	868-891	974-994							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2.	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	361-381	399-424	564-586	829-849					
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	361-381	399-424	829-849						
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	362-382	420-438	617-632	657-676					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	361-381								
PVP2_BTVIA	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	420-438	654-681							
PVP2_BTVIS	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-31	117-140	420-438	654-681					
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	153-168	229-252							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	301-317	334-360	522-543	673-690	764-789				
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	301-317	334-360	523-544	765-790					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	309-325	342-363	532-553	674-700	774-799				
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	51-75	303-319	408-425	514-535	665-691				
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	34-57	219-240	302-318	335-361	523-544	674-700	765-790		
PVP30_MABVP	MINOR NUCLEOPROTEIN VP30	MARBURG VIRUS (STRAIN MUSOKE)	50-75								
PVP32_ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	174-197								
PVP35_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	233-256								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	49-75	78-104							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	49-75	78-104							
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-304								
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-304								
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-305								
PVP38_HSVMG	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	255-270								
PVP38_HSVMN	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD11/75C/RL2)	255-270								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	296-311								
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	107-134	214-240	295-316						
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4/STRAIN VACCINE)	65-85	126-147	215-230	845-862					
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	123-144	212-227							
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	123-144	212-227							
PVP3_BTVIA	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	123-144	212-227							
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	121-142	671-695							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2/STRAIN AUS	121-142	675-695							
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	89-108	340-360	367-393	690-717	742-768	748-768	960-975		
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	405-429								
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	401-425	426-444	512-536	796-822					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	429-454								
PVP40_HSV11	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	141-168	472-492							
PVP40_HSVEB	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	50-67	95-119	483-504						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	342-368								
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	506-528								
PVP40_MABVM	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN MUSOKE)	95-110								
PVP40_MABVP	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN POPP)	95-110								
PVP40_NPVBM	STRUCTURAL GLYCOPROTEIN P40	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	223-242	256-272							
PVP40_VZVD	CAPSID PROTEIN VP24	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	47-64								
PVP41_NPVAC	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	229-248	262-278							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	483-508								
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	395-411	483-508							
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	14-38								
PVP48_NPVOP	P48 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	136-157								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	273-288								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	331-358								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	331-358								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	331-358								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	174-193	233-249	545-561						
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	174-193	233-249	535-551						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	174-193	233-249	535-551						

PCGENE	P1ICTL2IP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	174-193	233-249	535-551						
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	483-508								
PVP4_RDV	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS	386-407	493-514	626-645						
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	483-508								
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	483-508								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	483-508								
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	226-250	483-508							
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	181-207	234-249	482-507						
PVP4_ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	181-207	234-249	482-507						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	483-508								
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	181-207	234-249	482-507						
PVP4_ROTHU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	483-508	524-548							
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	76-91	181-207	234-249	482-507					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	181-207	234-249	482-507						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MU7)	181-207	234-249	482-507						
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	181-208	235-250	483-508						
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	181-207	234-249	482-507						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	181-207	234-249	482-507						
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	181-207	482-507							
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	181-207	482-507							
PVP4_ROTP5	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	235-250	483-508							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	487-512								
PVP4_ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	234-249	482-507							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	235-250	483-508							
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	483-508								
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	483-508								
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	395-411	483-508							
PVP4_SBMV	P4 PROTEIN	SOUTHERN BEAN MOSAIC VIRUS	90-114								
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	192-215	416-438	498-519	564-591					
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	295-317	326-345	494-517						
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	295-317	326-345	494-517						
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	295-317	494-517							
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	87-102	295-317							
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-317								
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-317								
PVP5_RDV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS	265-284	622-639	690-715						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	9-27	232-249	261-276						
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	321-337	438-462							
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	5-23	257-272							
PVP62_MRDV	PROB NONSTRUCTURAL 36.3 KD PROTEIN	MAIZE ROUGH DWARF VIRUS	130-146								
PVP64_NPVOP	MAJOR ENV GLYCOPROTEIN PREC	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	81-99	235-252	286-313						
PVP67_NPVAC	MAJOR ENV GLYCOPROTEIN PREC	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	84-102	238-255							
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS	155-172								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	9-27	232-249	261-276						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	204-221	233-248							
PVP6_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS	374-397								
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ)	374-397								
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	254-275								
PVP75_HSV8A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	127-147								
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	274-301	405-420	678-704						
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	197-222								
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	205-222	301-323							
PVP7_RDV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS	400-416								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	262-285								

PCGENE	P1XCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	98-123	638-660							
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	571-593								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-120								
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-120								
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-120								
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-120								
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-120								
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-120								
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-120								
PVP8_RDV	OUTER CAPSID PROTEIN P8 (	RICE DWARF VIRUS	374-400								
PVP8_RGDV	OUTER CAPSID PROTEIN P8	RICE GALL DWARF VIRUS	177-202	216-242	398-425						
PVP8_VACCC	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-242								
PVP8_VACCV	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	225-242								
PVP8_VARV	STRUCTURAL PROTEIN VP8 PRECURSOR	VARIOLA VIRUS	225-242								
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	111-129	214-241	251-271	379-405					
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	51-72								
PVP9_RGDV	NONSTRUCTURAL PROTEIN S9	RICE GALL DWARF VIRUS	151-175								
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	145-166	225-245							
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	122-144								
PVPRT_ADE12	ENDOPROTEASE	HUMAN ADENOVIRUS TYPE 12	161-181								
PVPRT_MMTVB	PROTEASE	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	42-63								
PVPRT_MPMV	PROTEASE	SIMIAN MASON-PFIZER VIRUS	80-99								
PVPRT_SMRVH	PROTEASE	SQUIRREL MONKEY RETROVIRUS	256-271								
PVPRT_SRVI	PROTEASE	SIMIAN RETROVIRUS SRV-1	80-99								
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE HXB3)	3-27								
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	4-27								
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	3-28								
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	3-27								
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	3-26								
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	4-27								
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	3-28								
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-27								
PVPU_HV1MN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	3-20								
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	3-28								
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	3-27								
PVPU_HV1SF	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	3-28								
PVPU_HV1SC	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	3-28								
PVPU_HV1Z2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	3-28								
PVPU_JSRV	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET	24-45								
PVPX_HV2BE	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	10-32								
PVPX_HV2CA	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	10-32								
PVPX_HV2D1	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	10-32								
PVPX_HV2D2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9-31								
PVPX_HV2G1	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	10-32								
PVPX_HV2NZ	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	10-32								
PVPX_HV2RO	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	10-32								
PVPX_HV2SB	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	10-32								
PVPX_HV2ST	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	10-32								
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	145-165								
PVPX_SIVAI	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1) (S	66-84								
PVPX_SIVM1	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVMK	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVML	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVS4	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMM4 ISOLATE) (SOOTY M	10-32								
PVPX_SIVSP	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE) (SOOTY MA	10-32								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-312	904-929							
PVS05_ROTBR	NONSTRUCTURAL PROTEIN NCVP2	BOVINE ROTAVIRUS (STRAIN RF)	140-157	461-487							

PCGENE FILE NAME	PIRCTLZIP PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS05_ROTH8	NONSTRUCTURAL PROTEIN NCVP2	HUMAN ROTAVIRUS (STRAIN IGV-80-3)	140-157	428-450	457-473						
PVS05_ROTPC	NONSTRUCTURAL PROTEIN NS53	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	88-112								
PVS05_ROTSI	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	399-414								
PVS06_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	202-225								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-85								
PVS06_ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	202-225								
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	202-225								
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	202-225								
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	22-40								
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	22-40								
PVS06_ROTH1	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	202-225								
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-85								
PVS06_ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	202-225								
PVS06_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	202-225								
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-85	314-340							
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	202-225								
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	131-155								
PVS08_ROTPC	GLYCOPROTEIN VP7 PRECURSOR	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	117-136								
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-295								
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	131-155								
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	131-155								
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	131-155								
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK3)	131-155								
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	131-155								
PVS09_ROTC7	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	134-158								
PVS09_ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	131-155								
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	205-232								
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	131-155	197-212							
PVS09_ROTHA	GLYCOPROTEIN VP7 (	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	197-212								
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	197-212								
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	197-212								
PVS09_ROTHL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	131-155	197-212							
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	131-155	197-212							
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	131-155	197-212							
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	131-155								
PVS09_ROTHR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	131-155								
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	197-212								
PVS09_ROTHV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	197-212								
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	131-155	197-212							
PVS09_ROTPS	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	131-155	197-212							
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	131-155								
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	197-212								
PVS09_ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BMI-1)	197-212								
PVS09_ROTRH	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	131-155								
PVS09_ROTSI	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	131-155								
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	136-153								
PVSH_HRSVA	SMALL HYDROPHOBIC PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	16-41								
PVSH_MUMP1	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL)	7-29								
PVSH_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2 & 6)	7-29								
PVSH_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	7-29								
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	10-29								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	7-29								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	7-29								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	7-29								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	7-29								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	6-29								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	10-29								

PCGENE	PIRCTL2P	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	7-29								
PVSH_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAJASHI)	10-29								
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	10-29								
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-136								
PVS13_REOVD	SIGMA 3 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	152-170								
PVS13_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN D5/JONES)	152-170								
PVS13_REOVL	SIGMA 3 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	152-170								
PVS1S_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	79-101								
PVST2_HEVBU	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA)	292-311								
PVST2_HEVMB	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO)	292-311								
PVST2_HEVMY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR)	292-311								
PVST2_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN)	292-311								
PVT2_HEVRH	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RHESUS)	160-179								
PVT2_MYXVL	TUMOR NECROSIS FACTOR $OL RECEPTOR PREC	MYXOMA VIRUS (STRAIN LAUSANNE)	261-283								
PVT2_SFVKA	TUMOR NECROSIS FACTOR $OL RECEPTOR PREC	SHOPE FIBROMA VIRUS (STRAIN KASZA)	270-289								
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN NS-1)	116-138								
PVT4_SFVKA	T4 PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	125-148								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	117-139	166-192	227-250						
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	409-430								
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	363-380	673-688							
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	260-278								
PVTER_HSVEB	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-381								
PVTER_HSVI1	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	309-333	756-781							
PVTER_HSVSA	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	218-241								
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	372-389								
PX_HPBGS	PROTEIN X	GROUND SQUIRREL HEPATITIS VIRUS	68-85								
PX_WHV1	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 1	68-85								
PX_WHV59	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 59	68-85								
PX_WHV7	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 7	68-85								
PX_WHV8	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8	68-85								
PX_WHV8I	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	68-85								
PX_WHVW6	PROTEIN X	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS2J)	68-85								
PY104_ADE07	HYPOTHETICAL 10 4 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	53-73								
PY108_SSV1	HYPOTHETICAL 10 8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	66-90								
PY10K_MSV5	HYPOTHETICAL 10 9 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	24-47								
PY118_SSV1	HYPOTHETICAL 11 8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	42-59								
PY11K_PASV	HYPOTHETICAL 11 9 KD PROTEIN	PANICUM STREAK VIRUS	29-52								
PY12K_BNYVG	RNA-3 HYPOTHETICAL 11 6 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE G1)	15-42								
PY12K_CMVSI	HYPOTHETICAL 12 4 KD PROTEIN	CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	8-30								
PY137_ADE02	HYPOTHETICAL PROTEIN B-137	HUMAN ADENOVIRUS TYPE 2	28-50								
PY13K_CLVK	HYPOTHETICAL 13 1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-55								
PY13K_CLVN	HYPOTHETICAL 13 1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-55								
PY13K_TYLCM	HYPOTHETICAL 13 3 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	10-27								
PY13K_TYLCV	HYPOTHETICAL 13 4 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	34-55								
PY145_ADE07	HYPOTHETICAL 14 5 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	108-132								
PY14K_CSMV	HYPOTHETICAL 14 5 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	54-80								
PY18K_SSV1	HYPOTHETICAL 18 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162							
PY206_ADE07	HYPOTHETICAL 20 6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73								
PY25K_BNYVF	RNA-3 HYPOTHETICAL 24 7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188								
PY29K_NPVAC	HYPOTHETICAL 29 9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90								
PY32K_SSV1	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142								
PY6K0_SSV1	HYPOTHETICAL 6 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44								
PY7K4_VACCV	HYPOTHETICAL 7 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36								
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120								
PY85K_SSV1	HYPOTHETICAL 85 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	155-173	543-565	657-675	764-784				

PCGENE	P12CTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PY97_ADE07	HYPOTHETICAL 9 7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77								
PY9K3_SSVI	HYPOTHETICAL 9 2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSVI	16-41	62-77							
PYAL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYBL2_SFV3L	BEL-2 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78								
PYDH1_HSVSC	HYP 28 7 KD PROTEIN IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230								
PYDH5_HSVSC	HYP 9 5 KD PROTEIN IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYGA1_HSVMB	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190								
PYGA1_HSVMM	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HHLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYH3J_VACCV	HYP HOST RANGE 27 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102								
PYI02_CVMA5	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI08_CVMI	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI08_CVMS	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	7-33								
PYKR2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYL12_ADE41	HYPOTHETICAL 8 0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73								
PYM2_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350					
PYM5P_IRV22	HYPOTHETICAL 15 9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46								
PYOR1_ADEG1	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTV1	HYPOTHETICAL 7 9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR2_COYMV	HYPOTHETICAL 13 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR2_EAV	HYPOTHETICAL 25 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR2_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR3_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR3_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR3_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-39								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR3_ADEG1	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR3_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYORJ_TTV1	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYORL_TTV1	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYORM_TTV1	HYPOTHETICAL 38 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYORP_TTV1	HYPOTHETICAL 20 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 43 5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP62_NPVOP	HYPOTHETICAL 12 2 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYPO4_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6Q	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF2_HSV6Q	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF3_HSV6Q	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRP1_IRV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRP4_IRV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRP5_IRV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						

PCGENE	P12CTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYRR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYRR3_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB2_NPVOP	HYPOTHETICAL 24 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVAE_VACCC	HYPOTHETICAL 18 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAF_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 7 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10 5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBO_VACCC	HYPOTHETICAL 11 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVD2_VACCV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDA_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVFF_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVGA_VACCC	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVKB_VACCC	HYPOTHETICAL 9 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL3_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								
PY14K_CSMV	HYPOTHETICAL 14 5 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	54-80								
PY18K_SSV1	HYPOTHETICAL 18 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162							
PY206_ADE07	HYPOTHETICAL 20 6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73								
PY25K_BNYVF	RNA-3 HYPOTHETICAL 24 7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188								
PY29K_NPVAC	HYPOTHETICAL 29 9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90								
PY32K_SSV1	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142								
PY6K0_SSV1	HYPOTHETICAL 6 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44								
PY7K4_VACCV	HYPOTHETICAL 7 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36								
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120								
PY85K_SSV1	HYPOTHETICAL 85 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	155-173	543-565	657-675	764-784				
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PY97_ADE07	HYPOTHETICAL 9 7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77								
PY9K2_SSV1	HYPOTHETICAL 9 2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77							
PYAL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYBL3_SFV3L	BEL-3 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78								
PYDH1_HSV5C	HYPOTHETICAL 28 7 KD PROTEIN IN DHFR 3'REGIO	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230								
PYDH3_HSV5C	HYPOTHETICAL 9 3 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYGA1_HSVMB	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190								
PYGA1_HSVMM	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HHLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYHRJ_VACCV	HYPOTHETICAL HOST RANGE 27 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102								
PYI02_CVMA5	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI0R_CVMI	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI0R_CVMS	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	7-33								
PYKR3_EBV	HYPOTHETICAL BKRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYL12_ADE41	HYPOTHETICAL 8 0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73								
PYM03_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350					
PYM5P_IRV22	HYPOTHETICAL 15 9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46								

PCGENE FILENAME	P12CTL2IP PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYOR1_ADEGI	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTVI	HYPOTHETICAL 7 9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR3_EAV	HYPOTHETICAL 25 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR3_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR3_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR3_NMV	HYPOTHETICAL 4 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR3_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR5_ADEGI	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR5_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYOR1_TTVI	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYORL_TTVI	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYORM_TTVI	HYPOTHETICAL 38 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYORP_TTVI	HYPOTHETICAL 20 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 45 3 KD PROTEIN IN P47 3'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP62_NPVOP	HYPOTHETICAL 12 3 KD PROTEIN IN P6 5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN IN P6 5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYP04_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN IN POL 3'REGION	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRF1_IRV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRF4_IRV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRF5_IRV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						
PYRA1_EBV	HYPOTHETICAL BARF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYRA2_EBV	HYPOTHETICAL BARF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTA1_EBV	HYPOTHETICAL BTAF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB3_NPVOP	HYPOTHETICAL 24 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVAB_VACCC	HYPOTHETICAL 18 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAJ_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 9 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10 5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBO_VACCC	HYPOTHETICAL 11 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVD2_VACCV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDA_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVFF_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVGA_VACCC	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVKB_VACCC	HYPOTHETICAL 9 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								

TABLE XIV

SEARCH RESULTS SUMMARY

FOR P23TLZIPC MOTIF

PCGENE TITLE NAME	PTXCTLZIP PROTEIN	All Viruses (no bacteriophages) VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PPOLY_TBRV3	RNA3 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S) (TBRV)	617-651	1041-1077						
PPOLY_TRSVR	RNA3 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY) (TOMBRSV)	316-347;							
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27) (BEV)	1811-1866	2001-2037						
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	102-135	1650-1678	3220-3248					
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	102-135	1560-1588	3130-3158					
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	226-255							
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	1120-1157							
PPOLG_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A22 (ECHO 9 VIRUS) (EC-9-V)	67-99							
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1601-1633							
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1512-1614							
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1585-1617							
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	1583-1615							
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	815-868	1585-1617						
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1111-1143	1403-1519	2401-2434					
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	1112-1146							
PPOLG_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	61-95	1112-1146						
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	61-95	1112-1146						
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	61-95							
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	61-95	1112-1146						
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	364-398							
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	61-95	1112-1146						
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974	817-846							
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	61-95	2399-2432						
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	60-94							
PPOLG_ECHTG	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	774-806							
PPOLG_ENCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1194-1226	1463-1501						
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN ENC-B NONDIABETOGENIC)	1196-1228	1465-1503						
PPOLG_EMDVI	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN ENC-D DIABETOGENIC)	1196-1228	1465-1503						
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61) (APHTHOVIRUS A)	1036-1064	1098-1133	1167-1199	1465-1501				
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12) (APHTHOVIRUS A)	1036-1074	1098-1133	1167-1199	1465-1501				
PPOLG_HCV	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIBFS)	1098-1133	1167-1199	1465-1501					
PPOLG_HCVA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1) (HCV)	1640-1670							
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT) (SWINE FEVER VIRUS)	1363-1393	1560-1588	3131-3159					
PPOLG_HCVK	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA) (SWINE FEVER VIRUS)	102-135	1560-1588	3131-3159					
PPOLG_HCVN	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1N) (HCV)	1640-1670							
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1J) (HCV)	1640-1670							
PPOLG_HCV1A	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476) (HCV)	254-291							
PPOLG_HCV1B	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6) (HCV)	711-742							
PPOLG_HCV1J	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8) (HCV)	711-742	1891-1924						
PPOLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE) (HCV)	1640-1670							
PPOLG_HCVJH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1) (HCV)	1640-1670							
PPOLG_HCVJK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN) (HCV	1640-1670							
PPOLG_HPAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	1314-1350	2068-2099						
PPOLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 41C)	1314-1350	2068-2099						
PPOLG_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	1314-1350	2068-2099						
PPOLG_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	1315-1351	2069-2100						
PPOLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	1315-1351	2069-2100						
PPOLG_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	1315-1351	2069-2100						
PPOLG_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	831-868	1517-1553						
PPOLG_HR14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1094-1132	2003-2041						
PPOLG_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	1435-1465	1816-1849	1983-2019					
PPOLG_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	1446-1475	1809-1842	1976-2013					
PPOLG_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1460-1492	1823-1856	1990-2026					
PPOLG_HRV7	STRUCTURAL POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71	1108-1145							
PPOLG_IBDVD		AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN D11)	223-260							
PPOLG_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	61-95	1233-1269	1516-1549	2279-2313	3274-3311			
PPOLG_JAEVS	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	61-95	1233-1269	1516-1549	2279-2313	3274-3311			

BAD ORIGINAL

PCGENE	PJUCTL2JP	All Viruses (no bacteriophage)						
FULLNAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PPOLG_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	61-93	1233-1289	1316-1949	2779-2813	3274-3311	
PPOLG_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	1161-1197					
PPOLG_KUNJM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	61-93	1561-594	1275-1312			
PPOLG_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	1157-1188	1519-1551	2230-2264	2366-2398	3093-3132	
PPOLG_MCFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	1174-1206	1330-1359				
PPOLG_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS (MDMV)	322-351					
PPOLG_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	61-93	1305-1342				
PPOLG_OMV	GENOME POLYPROTEIN	ORNITHODOA LUNTA MOSAIC VIRUS	344-376					
PPOLG_PEPVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE) (PEMV)	826-859	1086-1124				
PPOLG_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1121-1158					
PPOLG_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1122-1159					
PPOLG_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1120-1157					
PPOLG_POL3W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN W-3)	1120-1157					
PPOLG_POLJJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 2117)	1119-1156					
PPOLG_POLJL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PHLEONOTT AND PHLEON 12A[1]B)	1119-1156					
PPOLG_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D) (PPV)	2960-2991	3084-3111				
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR) (PPV)	1337-1368	1461-1490				
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT) (PPV)	2944-2975	3068-3097				
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC) (PPV)	2959-2990	3083-3112				
PPOLG_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPD1)	931-966	1411-1445	3149-3178			
PPOLG_PVYRU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN) (PVY)	1302-1336	1004-3033				
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N) (PVY)	1302-1336					
PPOLG_PVYVI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121) (PYFV)	210-262	1110-1139	1901-1931			
PPOLG_SBMVN	GENOME POLYPROTEIN	SOYBEAN MOSAIC VIRUS (STRAIN N)	245-274					
PPOLG_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPD1)	931-966	1411-1445	3149-3178			
PPOLG_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	301-336	1301-1331				
PPOLG_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UK/76)	1583-1617					
PPOLG_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG27/72)	1583-1617					
PPOLG_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN) (TBEV)	833-869	1157-1188	2166-2198	3093-3130		
PPOLG_TEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE) (TBEV)	1157-1188	2186-2198	3093-3132			
PPOLG_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV)	827-865	2998-3027				
PPOLG_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN) (TMEV)	1014-1102	1193-1221	1470-1508	1908-1939		
PPOLG_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1072-1100	1191-1219	1464-1506	1906-1937		
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1014-1102	1193-1221	1470-1508	1908-1939		
PPOLG_TMEV	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (TMEV)	1373-1602					
PPOLG_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS (TVMV)	2698-2731					
PPOLG_WNV2	GENOME POLYPROTEIN	WATARABALON MOSAIC VIRUS II	938-987					
PPOLG_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	61-95	535-590	1272-1309			
PPOLG_YEFVI	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	1157-1186	1228-1266	1495-1531	2198-2230	3092-3127	
PPOLG_YEFVJ	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	1157-1186	1228-1266	1495-1531	2198-2230	3092-3127	
PPOLG_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS (ZYMV)	329-358					
PPOLH_FCVF9	GENOME POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	1122-1159					
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	801-841					
PPOLN_HEVH1	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN HUMAN) (HEV)	1618-1652					
PPOLN_HEVMX	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	1618-1650					
PPOLN_HEVBAY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA) (HEV)	1618-1652					
PPOLN_HEVPA	NONSTRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	1617-1651					
PPOLN_MDDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	25-57					
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	1144-1180	1404-1439				
PPOLN_RUDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV	299-337	1363-1394				
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1146-1175	1406-1441				
PPOLN_SINKR	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1454-1486					
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1454-1486					

BAD ORIGINAL

FEATURE	DESCRIPTION	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
PROT_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	524-556					
PROT_EEEV1	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA3)(TEN BROECK))	525-557					
PROT_EEVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1201-1239					
PROT_EEVT1	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1201-1239					
PROT_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	1130-1182	1201-1215				
PROT_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN MM992) (RRV)	1216-1250					
PROT_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN TAU) (RRV)	1216-1250					
PROT_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1215-1251					
PROT_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 81-5)	1197-1233					
PROT_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP AND HRLP)	1197-1233					
PROT_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	1188-1224					
PROT_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106) (BIV)	742-773					
PROT_BIV27	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	742-773					
PROT_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE) (BLV)	343-374					
PROT_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK) (CAEV)	206-240	333-355				
PROT_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	1234-1267	1484-1518	1750-1788	1800-1831		
PROT_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369) (EIAV)	166-198	508-539				
PROT_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	166-198	508-539				
PROT_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	166-198	505-538				
PROT_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	126-154					
PROT_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	348-378					
PROT_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK) (HTLV-I)	637-668					
PROT_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE) (HTLV-I)	637-668					
PROT_HIV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	331-364	500-537				
PROT_HIV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HIV-1)	343-376	512-549				
PROT_HIV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE) (HIV-1)	343-376	512-549				
PROT_HIV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV-1)	343-376	512-549				
PROT_HIV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV-1)	330-363	499-536				
PROT_HIV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	331-364	500-537				
PROT_HIV1R	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (HIV-1)	335-368	504-541				
PROT_HIV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HIV-1)	330-363					
PROT_HIV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE) (HIV-1)	334-367	503-540				
PROT_HIV1N5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE) (HIV-1)	331-364	500-537				
PROT_HIV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HIV-1)	330-363	499-536				
PROT_HIV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE) (HIV-1)	331-364	500-537				
PROT_HIV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HIV-1)	343-376	512-549				
PROT_HIV1RI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (HIV-1)	330-363	499-536				
PROT_HIV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDA / U455) (HIV-1)	330-363	499-536				
PROT_HIV1Z3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE/EDC-234 / 1501A11) (HIV-1)	330-363	499-536				
PROT_HIV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1) (HIV-2)	333-386					
PROT_HIV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	331-384					
PROT_HIV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	334-387					
PROT_IPHA	PUTATIVE POL POLYPROTEIN	TRANSFER INTRACISTERNAL A-PARTICLE (IAP-IHA)	460-496					
PROT_JSRV	POL POLYPROTEIN	JAGSIEKTE SHEEP RETROVIRUS	186-220					
PROT_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	650-681					
PROT_OMVV5	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	61-98	102-130	196-231			
PROT_RTBV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	788-824	891-919	1099-1131			
PROT_RTBVP	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (PHILIPPINES) (RTBV)	788-824	891-919	1099-1131			
PROT_SIVL	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3) (SFV-1)	333-365					
PROT_SIVCP	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ) (CIV)	350-388	524-561				
PROT_SIVMV	POL POLYPROTEIN	SOOTY MANGABEY IMMUNODEFICIENCY VIRUS (SIVSM) (SIV)	17-55	58-89				
PROT_SRV1	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	630-681					
PROT_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	80-117	201-235	317-350			
PROT_VILVI	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-IK51)	80-117	317-350				
PROT_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-IK52)	80-117	201-235	317-350			
PP41_HSV4G	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	66-91					
PTP_NPVAC	PROTEIN-TYROSINE PHOSPHATASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	55-85					

BAD ORIGINAL

PCGENE	PISCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7
PREEP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS (CSV)	113-149						
PREV_BIV27	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	74-109						
PREV_EIAV9	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1169) (EIAV)	44-79						
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	44-79						
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	74-109						
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE) (SIV-AGM)	25-62						
PRIR1_ASFM2	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	630-666						
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	279-311	393-430	449-477				
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	60-92	503-531					
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN COPENHAGEN)	203-235						
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN WR)	203-235						
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARIOLA VIRUS	203-235						
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34-72	221-254	488-516				
PRMIL_AVEVR	RMIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN ROUS-ASSOCIATED VIRUS TYPE 1	149-177						
PRMIL_AVIII	RMIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN RETROVIRUS IC10	133-161						
PRP94_VACCV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIF	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	399-427						
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIF	VARIOLA VIRUS	399-427						
PRPO1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR)	1005-1033						
PRPO2_CAPVK	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	CAPRIPOXVIRUS (STRAIN KS-1)	297-333	667-696					
PRPO2_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	COWPOX VIRUS (CPV)	202-236	542-578					
PRPO2_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	202-236	542-578					
PRPO2_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	VARIOLA VIRUS	202-236	542-578					
PRPO7_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	38-66						
PRPO7_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VARIOLA VIRUS	38-66						
PRPO8_FOWPI	DNA-DIRECTED RNA POLYMERASE 18 KD POLYPEPTIDE	FOWLPOX VIRUS (STRAIN FP-1)	57-88						
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS (LV)	1233-1268	3133-3163	3426-3457				
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS (EAV)	171-207	3041-3072					
PRRP1_DHVII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	96-125	199-234					
PRRP1_IAV17	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	138-170						
PRRP1_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	564-598						
PRRP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	398-433	484-518					
PRRP2_IADH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	484-518						
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	484-518						
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	484-518						
PRRP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	484-518						
PRRP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	484-518						
PRRP2_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	484-518						
PRRP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	484-518						
PRRP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	484-518						
PRRP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	484-518						
PRRP2_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	484-518						
PRRP2_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	484-518						
PRRP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	484-518						
PRRP2_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	484-518						
PRRP2_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	484-518						
PRRP2_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	484-518						
PRRP2_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	484-518						
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	484-518						
PRRP2_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	484-518						
PRRP2_IAZJ1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	484-518						
PRRP2_IAZI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	484-518						
PRRP2_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	484-518						
PRRP3_IABDD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/DUDGERIGAR/HOKKAIDO/1/77)	515-553	585-613					
PRRP3_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	585-613						
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	579-613						
PRRP3_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	585-613						
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	585-613						

BAD ORIGINAL

PCGENE	P3DCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PRRPJ_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	585-613						
PRRPJ_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	585-613						
PRRPJ_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	585-613						
PRRPJ_IASE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/82)	585-613						
PRRPJ_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	585-613						
PRRPJ_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	585-613						
PRRPJ_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	585-613						
PRRPJ_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	735-769						
PRRPJ_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	735-769						
PRRPJ_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	609-641						
PRRPJ_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/JJ/50)	609-641						
PRRPJ_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	THOGOTO VIRUS (THO)	109-145	324-356					
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	410-443	712-745	1262-1295	1963-1999	2078-2112	2474-2508	3153-3191
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	708-740	3544-3577	3757-3785	3933-3961			
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS (BEV)	941-969	2137-2169	2178-2206				
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	346-380	684-714	1689-1722	2698-2730			
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	346-380	684-714	1687-1720	2356-2391	2696-2728		
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	173-207	322-350	482-515				
PRRPB_CVPRH	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS	80-113						
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	636-670						
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	303-331	1096-1128					
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118) (KOREAN HEMORRHAGIC FEVER VIRUS)	1938-1971						
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	892-922	1181-1213					
PRRPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	144-176	698-736	1042-1074	1797-1832			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	144-176	698-736	1042-1074	2223-2253			
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	193-227	647-683	788-825	1160-1192	1886-1914		
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1882-1913						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/43) (NDV)	626-661	1571-1603					
PRRPL_PI2HT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	268-305	558-595	654-688	1562-1599	1881-1912	2025-2053	
PRRPL_PI3H4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	41-76	735-764	784-814	2111-2139			
PRRPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	60-90	804-837	1365-1394	1930-1962			
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	60-90	804-837	1365-1394	1930-1962			
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS (RDV)	1293-1323						
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	1018-1055	2009-2044					
PRRPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	194-231	233-269	735-764	784-814	2140-2177		
PRRPL_SENIH	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN I, NIH RS)	14-51	53-89	555-584	1927-1955	1960-1997		
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	194-231	233-269	735-764	784-814	2140-2177		
PRRPL_SEOUS	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	394-431	1938-1971	2081-2119				
PRRPL_SV5WR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR) (SV5)	557-594	1094-1122	2020-2051				
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS (SYNV)	126-164	605-634	820-856	918-951	1484-1517		
PRRPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIH/BR-01) (TSWV)	43-79	843-880	2266-2298	2369-2403	2481-2511	2805-2840	
PRRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS (UUK)	1017-1051	1147-1177	1293-1321	2060-2095			
PRRPL_VSVIH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	209-246	312-349	1011-1039	1662-1697	1956-1989		
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	1011-1039	1956-1989					
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	138-171	209-246	312-349	961-999	1011-1039	1739-1772	2051-2087
PRRPO_BWYVF	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	346-374						
PRRPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	722-755						
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV) (BYDV)	722-755						
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV) (BYDV)	722-755						
PRRPO_CARLV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS (CARMV)	4-37						
PRRPO_CGMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	443-481	725-755	1095-1132	1565-1597			
PRRPO_CNV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CUCUMBER NECROSIS VIRUS (CNV)	470-501						
PRRPO_CRSI	PROBABLE RNA-DIRECTED RNA POLYMERASE	CYMBIDIUM RINGSPOT VIRUS	28-62	267-300	470-501				
PRRPO_IBDVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70) (IBDV)	186-218	274-302					
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS	260-288	511-543	599-627				
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	360-390	749-778					
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP) (IPNV)	360-390	749-778					

BAD ORIGINAL

PCGENE	PSICTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PRRPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	109-137	263-291	2077-2106				
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	109-137						
PRRPO_MCMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS (MCMV)	16-48	53-81					
PRRPO_PLRVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN T) (PLRV	576-607						
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	576-607						
PRRPO_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN) (PPMV)	575-607	702-730	859-891	1069-1106	1533-1565		
PRRPO_RCNMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS (RCNMV)	278-314	320-353					
PRRPO_REOVJ	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DJ/JONES)	284-315						
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	25-60	200-231	247-276				
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	200-231	247-276					
PRRPO_ROTPG	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	200-231	247-276					
PRRPO_ROTSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	25-60	200-231	247-276				
PRRPO_TACV	RNA POLYMERASE	TACARIBE VIRUS	17-52	109-138	2078-2112				
PRRPO_TBSVC	PROBABLE RNA-DIRECTED RNA POLYMERASE	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY) (TBSV)	470-501						
PRRPO_TCV	PROBABLE RNA-DIRECTED RNA POLYMERASE	TURNIP CRINKLE VIRUS (TCV)	280-318						
PRRPO_TMGMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	67-97	128-159	209-244	376-406	450-483	855-887	1527-1559
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE) (TMV)	128-159	376-406	700-728	1533-1565			
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN) (TMV)	128-159	376-406	700-728	1533-1565			
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO L) (TMV)	128-159	376-406	700-728	857-889	1533-1565		
PRRPO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	231-263						
PRRPO_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	5-40	234-270					
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	295-332						
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	295-332						
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	295-332						
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	295-332						
PRRPP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	211-248						
PRRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	212-249						
PRRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-249						
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32) (NDV)	220-255						
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45) (NDV)	220-255						
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2	216-253						
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	216-253						
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	220-257	332-364					
PRRPP_PI4HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	220-257	332-364					
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-168						
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	216-244						
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	216-244						
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND RABIES VIRUS (STRAIN PM)	216-244						
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	89-122	216-244					
PRRPP_RADVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	216-244						
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	530-566						
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	530-566						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HUSHIMI)	530-566						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	530-566						
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	530-566						
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN WJ) (SV5)	199-236						
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN MISSOURI	198-230						
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	197-230						
PSODC_VACCC	SUPEROXIDE DISMUTASE-LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-55						
PSODC_VACCV	SUPEROXIDE DISMUTASE-LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-55						
PSODC_VARV	SUPEROXIDE DISMUTASE-LIKE PROTEIN	VARIOLA VIRUS	19-55						
PSPIN_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	98-86	138-172	627-659	671-701			
PSPIN_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	167-200						
PSPI1_VACCC	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN COPENHAGEN)	112-140						
PSPI1_VACCV	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN WR)	112-140						
PSPI1_VARV	SERINE PROTEINASE INHIBITOR 1	VARIOLA VIRUS	116-144						
PTAGB_LOWPV	TRANS-ACTIVATOR PROTEIN P30	LOW FOX VIRUS	199-230						

BAD ORIGINAL

PCGENE	PSCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS (BFDV)	99-129	172-210	441-491				
PTAMI_POVHA	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	106-138						
PTAMI_POVM3	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	43-80						
PTAMI_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43-80						
PTAMI_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	43-80						
PTASM_POVBA	SMALL T ANTIGEN	POLYOMAVIRUS BK (STRAIN AS)	130-162						
PTASM_POVBK	SMALL T ANTIGEN	POLYOMAVIRUS BK	130-162						
PTASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMAVIRUS	106-138						
PTASM_POVMA	SMALL T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43-80						
PTASM_SV40	SMALL T ANTIGEN	SIMIAN VIRUS 40 (SV40)	132-164						
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	143-173	1469-1503	1791-1819	3102-3137			
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	161-192	699-736	812-840	2199-2228			
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	222-259	566-601	615-643	1436-1469	2037-2072		
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	265-297	559-589	1072-1106	3363-3392			
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	467-505	714-751	823-861	926-960	1503-1536	2421-2457	
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	369-400						
PTMAF_AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	230-267						
PTOP2_ASFB7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	119-153	1105-1142					
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	119-153	1104-1141					
PTREL_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	189-226						
PTYSY_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	121-156						
PUIL_HSV6U	PROTEIN IL	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	171-203						
PUDPF_NPVAC	ECDYSTEROID UDP-GLUCOSYLTRANSFERASE PRECURSO	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	183-219	187-425	452-484				
PUL02_HCMVA	HYPOTHETICAL PROTEIN UL2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-59						
PUL06_EBV	VIRION PROTEIN BORF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	355-386						
PUL06_HSV17	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-436						
PUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	222-251	437-475					
PUL06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	299-330						
PUL06_VZVD	VIRION GENE 54 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	223-252	502-530					
PUL07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186-216						
PUL07_HSVEB	GENE 55 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	Nov-39						
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-96						
PUL08_HSV17	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	614-648						
PUL08_VZVD	GENE 52 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	227-255						
PUL09_HSV17	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	678-713						
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	168-204						
PUL14_PRVNI	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	40-76						
PUL16_HSV17	PROTEIN UL16	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	22-52						
PUL17_HSV6U	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	302-339						
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	294-328						
PUL21_PRVNI	PROTEIN UL21 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	243-271						
PUL21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	46-92	373-412					
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	42-87						
PUL24_ILTVT	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	158-196						
PUL25_HSVEB	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	343-379						
PUL25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	290-323						
PUL25_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	540-571						
PUL28_HCMVA	HYPOTHETICAL PROTEIN UL28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	287-316						
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	464-501						
PUL31_HSVSA	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	161-197						
PUL32_EBV	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN BFLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	367-405						
PUL32_HSV17	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN UL32	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-438	564-592					
PUL32_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	81-115						
PUL32_HSVSA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 68	HERPESVIRUS SAIMIRI (STRAIN 11)	276-309						
PUL32_VZVD	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	553-581						
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	98-130						
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	138-169						

BAD ORIGINAL

FIGENE FILENAME	FUNCTION PROTEIN	AB Viruses (no bacteriophages) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FU1.36 HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186-223						
FU1.37 EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	85-121						
FU1.37 HSVER	GENE 21 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	702-732	778-812					
FU1.37 HSVSA	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	566-602						
FU1.37 VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	598-639	706-736	776-806				
FU1.38 HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133-188						
FU1.41 VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	274-307						
FU1.43 HSV11	MEMBRANE PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-70						
FU1.45 HSV11	GENE 15 MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	14-64	277-308					
FU1.47 HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	418-471	741-777					
FU1.47 HSVE4	97 KD ALPHA TRANS INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	580-613						
FU1.47 HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	587-632						
FU1.48 HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17	216-259						
FU1.49 HSV1F	TEGUMENT PROTEIN UL49 HOMOLOG	BOVINE HERPESVIRUS TYPE 1 (STRAIN PH-2)	133-168						
FU1.52 EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	382-417						
FU1.52 HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	569-629	771-805					
FU1.52 HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	516-544	780-618	913-947				
FU1.53 HSVSA	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	229-267	374-411					
FU1.54 HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-248						
FU1.54 HSVGI	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	105-139						
FU1.60 HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-148						
FU1.70 HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	36-65	626-664					
FU1.77 HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	381-413	565-598					
FU1.78 HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	262-290	301-341					
FU1.79 HSVSA	HYPOTHETICAL GENE 18 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	158-195						
FU1.81 HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	130-159						
FU1.83 HSVSA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	322-355						
FU1.88 HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	309-333						
FU1.88 HSV6U	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	150-187	338-372					
FU1.91 HSVSA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	23-53						
FU1.92 EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	106-144						
FU1.93 HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	123-157						
FU1.95 HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	383-420						
FU1.95 EBV	HYPOTHETICAL PROTEIN BKRF3	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	111-145						
FU1.BB HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102-130	132-161					
FU1.F1 HCMVA	HYPOTHETICAL PROTEIN IRL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	129-165						
FU1.C6 HCMVA	HYPOTHETICAL PROTEIN IRL12B	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	64-96						
FU1.D0 HCMVA	HYPOTHETICAL PROTEIN IRL13B	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	66-99						
FU1.95 EBV	HYPOTHETICAL PROTEIN BKRF3	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	81-114						
FUNG VACCC	IMMEDIATE-EARLY GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	139-189						
FUNG VARTU	IMMEDIATE-EARLY GLYCOSYLASE	VARICELLA VIRUS (STRAIN WU)	82-117						
FUNG VARV	IMMEDIATE-EARLY GLYCOSYLASE	VARIOLA VIRUS	82-117						
FUS02 HCMVA	HYPOTHETICAL PROTEIN HXLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-73						
FUS07 HCMVA	HYPOTHETICAL PROTEIN HXLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153-190						
FUS09 HCMVA	HYPOTHETICAL PROTEIN HXLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	178-213						
FUS10 HCMVA	HYPOTHETICAL PROTEIN HXLF8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-170						
FUS12 HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	29-67	113-142					
FUS13 HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-45						
FUS15 HCMVA	HYPOTHETICAL PROTEIN HVLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	303-335						
FUS16 HCMVA	HYPOTHETICAL PROTEIN HVLF8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151-188	243-274					
FUS17 HCMVA	MEMBRANE PROTEIN HVLF9	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	185-222						
FUS18 HCMVA	VIRION MYRISTYLATED PROTEIN HVLF11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-299						
FUS36 HCMVA	HYPOTHETICAL PROTEIN HRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	132-164						
FUS37 HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	203-235						
FUS39 HCMVA	HYPOTHETICAL PROTEIN IRL6-4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	246-276						
FUS50 HCMVA	HYPOTHETICAL PROTEIN IRL6-5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208-246						

BAD ORIGINAL

PLGENE	PLPCTLZIP	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
ENTRYNAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PV125_ANVLE	125 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	263-292						
PV16K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	24-62						
PV140_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	111-342						
PV17K_BSMV	17 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-75						
PV1A_CMVSN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN SNY) (CMV)	674-709						
PV1B0_ASFB7	L1B0 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	103-133						
PV2A_BBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	616-671						
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	133-363	616-671	762-799				
PV2A_CMVSN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN SNY) (CMV)	208-243	292-320					
PV2A_CMVQ	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q) (CMV)	265-240						
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS (TAV)	297-335						
PV2B0K_TRVTC	291 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	102-133						
PV2A_BBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	155-187						
PV2A_BNYV	2A PROTEIN	BROME MOSAIC VIRUS (BMV)	159-189						
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	160-188						
PV2A_IBVB	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	5-42						
PV2A_IBVBI	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BI61) (IBV)	5-42						
PV2A_IBVPO	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	5-42						
PV2A_IBVUS	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/61/66) (IBV)	5-42						
PV31K_ACLSV	30 6 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS (ACLSV)	70-106						
PV31K_BWYVF	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	166-198						
PV31K_BWYVG	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GRI) (BWYV)	166-198						
PV36K_PLRV1	36 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	160-192						
PV36K_PLRVW	36 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	160-192						
PV38K_BSMV	38 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	320-353						
PV70K_PLRV1	69 7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	220-257						
PV70K_PLRVW	69 7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	220-257						
PV90K_ANVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	103-131						
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-251						
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	217-251						
PVA04_VARV	PROTEIN A4	VARIOLA VIRUS	207-241						
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-133						
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	96-133						
PVA18_VACCC	36 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	390-421						
PVA18_VACCV	36 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	390-421						
PVA18_VARV	36 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	390-421						
PVA32_VACCC	PROTEIN A32	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-111	170-203					
PVA32_VARV	PROTEIN A32	VARIOLA VIRUS	81-111	170-203					
PVA33_VACCC	PROTEIN A33	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-76						
PVA33_VACCV	PROTEIN A33	VACCINIA VIRUS (STRAIN WR)	42-76						
PVA33_VARV	PROTEIN A33	VARIOLA VIRUS	42-76						
PVA34_VACCC	PROTEIN A34	VACCINIA VIRUS (STRAIN WR) AND VACCINIA VIRUS (STRAIN COPENHAG	48-79						
PVA34_VARV	PROTEIN A34	VARIOLA VIRUS	18-49						
PVA40_VACCC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-37						
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	94-129						
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	94-129						
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	93-130						
PVA11_VACTC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-141						
PVA11_VACTV	PROTEIN A11	VACCINIA VIRUS (STRAIN WR)	109-143						
PVALI_BCTV	ALI PROTEIN	BEET CURLY TOP VIRUS (BCTV)	89-118						
PVALI_BGMV	ALI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	89-118						
PVALI_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 866	88-117						
PVALI_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	88-117						
PVALI_PYMVV	ALI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	88-118						
PVALI_TGMV	ALI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS (TGMV)	90-119						
PVALI_TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARIANNA) (TYLCV)	89-118						
		TOMATO YELLOW LEAF CURL VIRUS (TYLCV)	87-116						

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS (BCTV)	82-113						
PVAL1_CLVK	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-113						
PVAL1_CLVN	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-113						
PVAL1_TYLCM	AL1 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE) (TYLCV)	78-116						
PVAL1_TYLCV	AL1 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV	77-113						
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841) (CAMV)	20-53	81-116					
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4) (CAMV	20-53	102-130					
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC) (CAMV)	20-53	81-116					
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153) (CAMV)	20-53	81-116					
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147) (CAMV)	20-53	81-116					
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG) (CAMV)	20-53	81-116					
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	124-156	489-525					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	124-156	489-525					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-525						
PVB16_COWPX	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	COWPOX VIRUS (CPV)	89-126						
PVB16_VACCV	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	89-126						
PVB19_VACCC	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	213-244						
PVB19_VACCD	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	211-242						
PVB19_VACCV	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	211-242						
PVB19_VARV	SURFACE ANTIGEN 5 PRECURSOR	VARIOLA VIRUS	211-242						
PVBR1_BGMV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-198						
PVC01_SFVKA	G-PROTEIN COUPLED RECEPTOR HOMOLOG C1	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	98-130						
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-139	182-216					
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	109-139	183-215					
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	109-139						
PVC06_VACCC	PROTEIN C6	VACCINIA VIRUS (STRAIN COPENHAGEN)	36-67						
PVC06_VACCV	PROTEIN C6	VACCINIA VIRUS (STRAIN WR)	36-67						
PVC06_VARV	PROTEIN C6	VARIOLA VIRUS	36-67						
PVC07_SFVKA	HYPOTHETICAL PROTEIN C7	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	60-97						
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	573-610						
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	573-610						
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	85-121						
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-158						
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	121-158						
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	121-158						
PVC21_VACCC	PROTEIN C21/B22	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-34						
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	148-183	200-230					
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-78	128-161	258-286				
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	19-49						
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	124-161	666-696	841-869				
PVCAP_HSVER	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1P) (EHV-1)	17-54	198-232	272-301				
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	144-179	196-226	734-769	1062-1096			
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S) (PRV)	189-221	260-289					
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	31-68						
PVCOR1_AD02	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	86-115						
PVCOR1_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-114						
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-50	146-182					
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-50	146-182					
PVD01_VARV	PROTEIN D1	VARIOLA VIRUS	12-50	146-182					
PVD05_FOWPI	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	315-352						
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	320-348						
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	320-348						
PVD05_VARV	PROTEIN D5	VARIOLA VIRUS	320-348						
PVD10_FOWPI	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	114-143						
PVE05_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN DAIREN I)	31-60						
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	226-260	430-458	511-540				
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	226-260	430-458	511-540				

BAD ORIGINAL

PUGENE	PIR:TITLE	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
E1E_ADE40	PROTEIN	VIRUS	430-458	511-540					
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	1-41						
PVE10_VACCC	PROTEIN E10	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41						
PVE10_VACCV	PROTEIN E10	VACCINIA VIRUS (STRAIN WR)	1-41						
PVE10_VARV	PROTEIN E10	VARIOLA VIRUS	102-131						
PVE12_HPV16	PROBABLE E1 PROTEIN 2	HUMAN PAPILLOMAVIRUS TYPE 16	45-77						
PVE18_NPVAC	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	4-35						
PVE1_HPV05	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	258-291						
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	255-288						
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	238-267	519-547					
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	238-267	519-547					
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	230-263						
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	242-271						
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	103-138	193-231					
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	238-267						
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	6-35						
PVE1_PAPVD	E1 PROTEIN	DEER PAPILLOMAVIRUS	258-291						
PVE1_PCPVI	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	161-201						
PVE34_NPVAC	EARLY 35.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	237-290						
PVE3_HPV57	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	118-150						
PVE3_RHPVI	E3 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	151-182						
PVE41_NPVAC	EARLY 40.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	117-147						
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	14-52						
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	18-56						
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	18-56						
PVE5_HPV13	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	18-56						
PVE5_HPV58	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	89-118						
PVE5_PCPVI	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	21-58						
PVE5_RHPVI	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	109-140						
PVE6_HPV1A	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	91-128						
PVE7_HPV05	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	55-90						
PVE7_HPV08	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	55-90						
PVE7_HPV11	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	47-81						
PVE7_HPV16	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	47-81						
PVE7_HPV1A	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	15-77						
PVE7_HPV31	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	47-83						
PVE7_HPV33	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	47-83						
PVE7_HPV35	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	48-84						
PVE7_HPV41	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	61-94						
PVE7_HPV47	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	55-90						
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-94						
PVE7_HPV58	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	48-84						
PVE7_HPV6B	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	55-90						
PVE7_PAPVD	E7 PROTEIN	DEER PAPILLOMAVIRUS	47-83						
PVE7_PAPVE	E7 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS (EEPV)	48-86						
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	60-93						
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	123-157	630-678					
PVENV_BLV	ENVELOPE PROTEIN	BOVINE LEUKEMIA VIRUS (BLV)	134-182						
PVENV_DIFH	ENVELOPE GLYCOPROTEIN PRECURSOR	DROSOPHILA VIRUS (STRAIN INDIANA) (DIHO)	16-51	87-117					
PVENV_MCVI	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCVI)	207-235						
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCVII)	201-236						
PVENV_VACCC	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	201-236						
PVENV_VACCI	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN IHD-J)	208-241						
PVENV_VACCP	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN L-IVP)	208-241						
PVENV_VACCV	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN WR)	208-241						
PVENV_VARV	MAJOR ENVELOPE PROTEIN	VARIOLA VIRUS	135-187	208-241					

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVF03_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	2-40	61-93					
PVF03_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	2-40	61-93					
PVFP1_FOWPV	PROTEIN FP1	FOWLPOX VIRUS	297-330						
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	237-267						
PVFP7_CAPVK	PROTEIN F7	CAPRIPOXVIRUS (STRAIN KS-1)	89-118						
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-61						
PVFUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	28-61						
PVFUS_VARV	14 KD FUSION PROTEIN	VARIOLA VIRUS	28-61						
PVG01_HSVII	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	317-346						
PVG03_HSVEB	HYPOTHETICAL GENE 2 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	163-196						
PVG02_VACCV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGI	92-120						
PVG02_VARV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTE	VARIOLA VIRUS	92-120						
PVG03_HSVII	HYPOTHETICAL GENE 3 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	108-136						
PVG06_HSVII	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	54-83						
PVG06_VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	99-136						
PVG06_VARV	PROTEIN G6	VARIOLA VIRUS	99-136						
PVG07_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	113-145						
PVG07_VARV	PROTEIN G7	VARIOLA VIRUS	113-145						
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	303-338						
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	266-301						
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	303-338						
PVG11_HSVII	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	150-183						
PVG12_HSVII	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	206-243						
PVG12_HSVSA	HYPOTHETICAL GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-106						
PVG1_SPVIR	CAPSID PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	254-292	303-337	414-452				
PVG22_HSVII	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	300-337	647-678					
PVG23_HSVII	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	70-108						
PVG26_HSVII	HYPOTHETICAL GENE 26 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	94-125						
PVG27_HSVSA	HYPOTHETICAL GENE 27 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	36-74						
PVG28_HSVII	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	491-521						
PVG2R_AMEPV	HYPOTHETICAL G2R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	180-217						
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	209-244						
PVG35_HSVII	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	15-46	190-226					
PVG36_HSVSA	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	151-185						
PVG39_HSVII	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	543-577	648-682					
PVG40_HSVSA	HYPOTHETICAL GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-216						
PVG41_HSVII	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45	202-233					
PVG42_HSVII	HYPOTHETICAL GENE 42 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	91-125						
PVG43_HSVII	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	109-140	157-185					
PVG46_HSVII	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	888-925						
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	329-357						
PVG50_HSVSA	PROBABLE TRANSCRIPTION ACTIVATOR EDRF1	HERPESVIRUS SAIMIRI (STRAIN 11)	113-141						
PVG51_HSVII	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	29-64	84-120					
PVG52_HSVII	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	96-134						
PVG55_HSVII	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	100-129						
PVG56_HSVII	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	364-396	631-667	1091-1126				
PVG58_HSVII	HYPOTHETICAL GENE 58 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	342-375	480-508					
PVG58_HSVSA	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	25-60	195-233					
PVG59_HSVII	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	82-118						
PVG61_HSVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	76-109						
PVG64_HSVII	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	55-89	363-401	420-452				
PVG65_HSVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	801-836	1146-1174	1290-1326				
PVG67_HSVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	1150-1185						
PVG6_SPVIR	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	60-89						
PVG71_HSVSA	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	128-158						
PVG72_HSVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	445-478	720-751	1138-1189	1252-1285			
PVG75_HSVII	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	263-291	387-422					

BAD ORIGINAL

PVGLNF	P.FACTLIP	All Viruses (no bacteriophage)						
ENTRY_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PVGN6_IISV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)(CCV)	187-221					
PVGT_SPV1B	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-ARIA2 B	18-46					
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IIBV)	1319-1747	1856-1891	2105-2146	3601-3633		
PVGID_HCMVA	GLYCOPROTEIN H (GP86) PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-115	137-185				
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	1259-1294					
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	651-681					
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	1259-1294					
PVGL2_CVBNI	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN NEBUS)	1259-1294					
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	1259-1294					
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	1259-1294					
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	1053-1088					
PVGL2_CVMA4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	1267-1304					
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59	1215-1252					
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	1267-1304					
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	1136-1163					
PVGL2_CVPFS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	612-665	736-764	1328-1363			
PVGL2_CVPHI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	612-665	736-764	1328-1363			
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	610-663	734-762	1326-1361			
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	610-663	734-762	1326-1361			
PVGL2_CVPRB	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS	512-560	1104-1139				
PVGL2_CVPRAI	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RA1/4) (PRCV)	408-441	512-560	1104-1139			
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB	610-663	734-762	1326-1361			
PVGL2_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146) (FIPV)	615-668	739-767	1331-1366			
PVGL2_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IIBV)	133-188					
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-147	706-743				
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	116-147	707-744				
PVGLB_HSV6U	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-110					
PVGLD_IISVBI	GLYCOPROTEIN D PRECURSOR	BOVINE HERPESVIRUS TYPE 1	234-288					
PVGLD_IISVB2	GLYCOPROTEIN D-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BHV) (BOVINE MAMMILLITIS VIRUS	745-774					
PVGLD_IISVBC	GLYCOPROTEIN D PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER	233-287					
PVGLH_IL2V6	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 63) (ILTV)	442-472					
PVGLH_IL2V5	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2) (ILTV)	453-482					
PVGLH_ILTVT	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE VB1) (ILTV)	453-482					
PVGLH_MCMV3	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-161	738-776				
PVGLC_IISV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	467-500					
PVGLC_IISV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	467-500					
PVGLC_IISV2	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	433-465					
PVGLC_IISV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN JJJ)	436-466					
PVGLC_IISVBC	GLYCOPROTEIN C PRECURSOR (GIII)	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-507					
PVGLC_VZVD	GLYCOPROTEIN (GPV)	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	331-388	513-548				
PVGLC_VZVS	GLYCOPROTEIN (GPV)	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT) (VZV)	331-388	513-548				
PVGLD_IISVEA	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AUSTRALIA-1)	340-370					
PVGLD_IISVEI	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-70	390-420				
PVGLD_IISVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-70	390-420				
PVGLE_IISVE4	GLYCOPROTEIN E	EQUINE HERPESVIRUS TYPE 4	95-125					
PVGLE_IISVEH	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	61-100	390-420				
PVGLE_IISVEL	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	61-100	391-422				
PVGLF_PAVRI	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN BECKER) (PRV)	112-169					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2) (HRS)	269-301	482-511				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN) (BRS)	484-513					
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94) (BRS)	484-513					
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	562-596					
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	484-513					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	484-513					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	484-513					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	484-513					
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)	224-256	451-484				

BAD ORIGINAL

PCGENE	PIR CLASSIF	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA	227-259	454-487					
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-256	451-484					
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-38	446-474					
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	446-474						
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	446-474						
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-38	446-474					
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/43) (NDV)	132-165						
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46) (NDV)	132-165						
PVGLF_PIODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	531-565						
PVGLF_PIHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-484						
PVGLF_PIJB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	453-481						
PVGLF_PIH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885	453-481						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR (	RINDERPEST VIRUS (STRAIN KABETE O) (RDV)	220-252	447-480					
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L) (RDV)	220-252	447-480					
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-488						
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-488						
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-488						
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-488						
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-488						
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN WJ) (SV5)	446-474						
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	452-481						
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	327-364						
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SONCHUS YELLOW NET VIRUS (SYNV)	524-553						
PVGLG_VSVIC	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	450-488						
PVGLG_VSVIO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	457-492						
PVGLG_VSVO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN ORSAY)	450-488						
PVGLG_VSVSJ	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	450-488						
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	691-719						
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	690-718						
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	215-247	640-677					
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4	814-850						
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1	807-843						
PVGLI_HCMVA	IMMEDIATE EARLY GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-194						
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	197-227	438-468	982-1020	1049-1084			
PVGLM_BUNLT	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE 1.74)	190-220						
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	190-220	144-381					
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	193-228	434-472	823-854				
PVGLM_DUGAV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	244-271	617-672	886-915	935-965	1403-1441		
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1) (KOREAN HEMORRHAGIC FEVER VIRUS)	610-641	1081-1119					
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	188-222	612-643	1082-1120				
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	188-222	612-643	1083-1121				
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	188-222	612-643	1083-1121				
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	269-307	1028-1062					
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS (PHV)	616-649	1088-1121					
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	949-982	1275-1309					
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	620-653	1092-1125					
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	620-653	1092-1125					
PVGLM_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (RVFV)	620-650	830-863					
PVGLM_RVFVZ	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	620-650	830-863	1156-1185				
PVGLM_SEOUB	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	610-641	1081-1119					
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	605-641	1082-1120					
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11) (SAPPORO RAT VIRUS)	610-641	1081-1119					
PVGLM_UUK	M POLYPROTEIN PRECURSOR	UUKUNIEMI VIRUS (UUK)	431-468	966-995					
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS (BEV)	1491-1526						
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	12-45						
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	237-265						
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN NIGERIA)	238-266						

BAD ORIGINAL

PCGENE	PJUCT12JP	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	12-50					
PVGLY_PIAV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-50					
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-50	89-124				
PVGLY_TACV3	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V3	12-50	89-124				
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	12-50	89-124				
PVGLY_TACV1	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-50	89-124				
PVGNB_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS (CPMV)	1323-1555					
PVGNM_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS (CPMV)	209-242	741-771				
PVGNM_CPSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	50-86	479-515				
PVGNM_RCMV	GENOME POLYPROTEIN M	RED CLOVER MOTTLE VIRUS (RCMV)	766-799					
PVGP2_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111					
PVGP2_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111					
PVH01_VACCC	LATE PROTEIN H3	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-89					
PVH01_VACCV	LATE PROTEIN H3	VACCINIA VIRUS (STRAIN WR)	54-89					
PVH02_VARV	LATE PROTEIN H3	VARIOLA VIRUS	115-149					
PVH05_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	115-149					
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	133-167					
PVH05_VARV	PROTEIN H5	VARIOLA VIRUS	107-143					
PVHEL_LSV	PROBABLE HELICASE	LUMPY SKIN DISEASE VIRUS (LSDV)	54-82					
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-82					
PVI01_VARV	PROTEIN I1	VARIOLA VIRUS	55-88					
PVI06_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	55-88					
PVI08_VARV	PROTEIN I6	VARIOLA VIRUS	391-424					
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	391-424					
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	391-424					
PVI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	391-424					
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	240-271					
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	240-271					
PVIF_BIV06	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 1067) (BIV)	42-78					
PVIF_BIV27	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	42-78					
PVIF_SIVGB	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	46-78					
PVIF_SIVMM	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	82-111					
PVIP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN (UNK)	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	135-159					
PVIP1_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	68-100					
PVIP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-114	136-171	230-262			
PVIP_HSV18	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AR4P) (EHV-1)	24-56	91-127	145-180	332-361		
PVIP_HSV5A	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-111					
PVINT_ASV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	253-291					
PVIO5_VACCC	PROTEIN I5	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-85					
PVIO5_VACCV	PROTEIN I5	VACCINIA VIRUS (STRAIN WR)	54-85					
PVIO5_VARV	PROTEIN I5	VARIOLA VIRUS	54-85					
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-120					
PVK04_VACCV	PROTEIN K4	VACCINIA VIRUS (STRAIN WR)	87-120					
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	74-103					
PVK05_VACCV	PROTEIN K5	VACCINIA VIRUS (STRAIN WR)	87-116					
PVL02_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-76					
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-76					
PVL03_VARV	PROTEIN L2	VARIOLA VIRUS	39-76					
PVL01_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	292-322					
PVL01_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	292-322					
PVL01_VARV	PROTEIN L3	VARIOLA VIRUS	291-321					
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	16-43					
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-43					
PVL1_HPV16	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	333-406					
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS) (CRPV)	36-57					
PVL2_HPV05	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	27-57					
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	27-57					
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	28-58					

BAD ORIGINAL

PGCLSF	PJECTLZIP	All Viruses (no bacteriophage)	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4
PVL3_HPV39	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	29-59	283-313						
PVL3_HPV45	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	344-379							
PVL3_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	26-57							
PVL3_HPV51	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	29-59							
PVL3_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	27-57							
PVL3_HPVAE	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	29-59							
PVL3_PCPV1	PROBABLE L2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	29-59							
PVL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS 1 TYPE 1)	144-177	686-718						
PVM1_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING	280-318	324-361						
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	168-199							
PVM2I_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199							
PVM2I_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199							
PVM2_REOVJ	MAJOR VIRION STRUCTURAL PROTEIN MU-MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199							
PVM2I_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-199							
PVM2I_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	333-364							
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	308-342							
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	122-150							
PVME1_CVBN	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	64-102							
PVME1_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	64-102							
PVME1_CVMJ3	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	65-103							
PVME1_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	65-103							
PVME1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS (TCV)	64-102							
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	73-101							
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE A42) (IBV)	73-101							
PVMEM_EHV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	178-213							
PVNP_CERV	NUCLEOCAPSID PROTEIN	CARNATION ETCHED RING VIRUS (CERV)	91-126							
PVNP_SOCMV	NUCLEOCAPSID PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	66-98	273-305						
PVNSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 55) (DHBV)	201-238	269-302						
PVNSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA) (DHBV)	194-227	268-301						
PVNSA_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (DHBV)	137-190	231-264						
PVNSA_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE STRANGHAI DUCK ISOLATE 51) (DHBV)	194-228	269-302						
PVNSA_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS (GSHV)	209-241	271-307						
PVNSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	159-195	236-269						
PVNSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	70-98							
PVNSA_HPBV3	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	244-272							
PVNSA_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	244-272							
PVNSA_HPBVB	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS D VIRUS (SUBTYPE ADW / STRAIN 991)	244-272							
PVNSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	233-261							
PVNSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	70-98							
PVNSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-261							
PVNSA_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	233-261							
PVNSA_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH1 / CHIMPANZEE ISOLATE)	233-261							
PVNSA_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS D VIRUS (SUBTYPE ADR / STRAIN NC-1)	70-98							
PVNSA_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PIDW282)	233-261							
PVNSA_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINES/PIDW294)	244-272							
PVNSA_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	244-272							
PVNSA_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	70-98							
PVNSA_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	233-261							
PVNSA_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	233-261							
PVNSA_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	233-261							
PVNSA_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	267-241	268-305						
PVNSA_WHVS9	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	212-246	274-310						
PVNSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-246	274-310						
PVNSA_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR 1	WOODCHUCK HEPATITIS VIRUS 1	212-246	274-310						
PVNSA_WHVM	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS M (INFECTIOUS CLONE)	212-246	274-305						
PVNSA_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR 1	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW821)	125-161							
PVMT1_IAZH	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MIWA/1/80)	10-42							

BAD ORIGINAL

PCGENE	PUCTLEIP	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2
FULLNAME	PROTEIN	VIRUS	5-34	141-170				
PVAI9_MYXVL	M-T8 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	246-282					
PVAI9_MYXVL	M1-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	11-48					
PVN02_VACCC	PROTEIN N2	VACCINIA VIRUS (STRAIN COPENHAGEN	11-48					
PVN02_VACCV	PROTEIN N2	VACCINIA VIRUS (STRAIN WR)	11-48					
PVN02_VARV	PROTEIN N2	VARIOLA VIRUS	11-48					
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	336-366					
PVNCA_AAV2	DNA REPLICATION PROTEIN	ADENO-ASSOCIATED VIRUS 2 (AAV2)	163-196	385-401				
PVNCS_PAVNO	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS (BPV)	180-217	346-377	419-471			
PVNS1_AIISV4	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	331-380					
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/77)	114-144					
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	114-144					
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	114-144					
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	107-144					
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	104-141					
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	107-144					
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	104-141					
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	104-141					
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	114-144					
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	114-144					
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	107-144					
PVNS1_IALEI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	114-144					
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	114-144					
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/48/76)	107-144					
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	107-144					
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	107-144					
PVNS1_IANYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/NYNAIMIANEDA-TIIA1/76)	104-141					
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	107-144					
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	107-144					
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/168/78)	107-144					
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/159/79)	107-144					
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	114-144					
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM:GLILIT/1492-B/72)	107-144					
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	107-144					
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	104-141					
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1/72)	107-144					
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	114-144					
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	114-144					
PVNS1_IAZ11	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	107-144					
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	266-295					
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-255					
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-255					
PVNS2_IHRSV1	NONSTRUCTURAL PROTEIN 2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	20-49					
PVNS2_IHRSVA	NONSTRUCTURAL PROTEIN 2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	48-77					
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40	48-77					
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	48-77					
PVNS4_CVMS	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-45					
PVNS4_CVPFS	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS77	4-34					
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR	4-39					
PVNS4_CVRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS	4-39					
PVNST_CVAA5	10 KD NONSTRUCTURAL PROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	45-80					
PVNST_CVMHH	10 KD NONSTRUCTURAL PROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	49-84					
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-255					
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-255					
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-255					
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-255					
PVNUA_PRVRA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	736-784					
PVNUC_INIVH	NUCLEOPROTEIN	HUMAN VIRUS (STRAIN INDIANA/1110/81) (HRV)	369-431	441-478				

BAD ORIGINAL

PCGENE	PIJCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	354-388						
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	354-388						
PVNUC_IAIPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	354-388						
PVNUC_IAITE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	354-388						
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-46						
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-46						
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN	511-539	550-581					
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	511-539						
PVORI_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	121-150	641-671					
PVORI_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	1667-1703						
PVORI_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYEAV)	121-153						
PVP03_HSVSA	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	462-493						
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	4-38						
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	4-38						
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	260-291						
PVP19_HSVEB	CAPSID ASSEMBLY AND DNA MATURATION PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	239-268	287-325					
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-172						
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	46-79	206-238					
PVP23_HSVEB	PROBABLE CAPSID PROTEIN VP23	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	18-48						
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	224-253						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	408-441						
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	649-683						
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	558-586	649-683					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	391-424	564-593					
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	654-688						
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	654-688						
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	878-915						
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	334-367	522-557					
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	334-367	523-558					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	342-377	532-567					
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	514-549	589-617	811-841				
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	335-368	523-558					
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-311						
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-311						
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-312						
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	107-141						
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	383-412	734-770					
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	383-412	734-770					
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	297-330						
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	652-688						
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	429-457						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11	119-152						
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882) (ILTV)	84-119						
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV	485-516						
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	239-270						
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	553-591						
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	553-591						
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	554-592						
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	93-122	468-499					
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	278-308	624-659					
PVP5_BRD	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	96-133	295-326					
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	295-324						
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-324						
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-324						
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	290-325						
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	691-719						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	159-187						

BAD ORIGINAL

PCGENE	PJUCTL2IP	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILENAME	PROTEIN	VIRUS							
PVP63_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	135-183	216-245					
PVP63_NRDV	PROBABLE NONSTRUCTURAL 38 3 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (NRDV)	23-41	222-237					
PVP64_NPVOP	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	285-313						
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	281-316						
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GMNPV)	190-233						
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	155-183						
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	155-183						
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	159-187						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	131-159						
PVP6_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	180-209						
PVP6_WTVNI	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NI) (WTV)	180-209						
PVP39_NPVAC	39 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	405-442						
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS (WTV)	454-490						
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	77-113						
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-139						
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-139						
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-139						
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-139						
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-139						
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-139						
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-139						
PVP8_RDV	OUTER CAPSID PROTEIN P8	RICE DWARF VIRUS (RDV)	374-412						
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS (WTV)	164-195	379-412					
PVP8E_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	145-173						
PVP8E_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	122-151						
PVPR_HIV1A2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	17-34						
PVPR_HIV2BE	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN) (HIV-2)	41-73						
PVPR_HIV2CA	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	41-73						
PVPR_HIV2D1	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194) (HIV-2)	41-73						
PVPR_HIV2D2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205_7) (HIV-2)	41-73						
PVPR_HIV2NZ	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	41-73						
PVPR_HIV2RO	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	41-73						
PVPR_HIV2SB	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY) (HIV-2)	41-73						
PVPR_HIV2ST	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST) (HIV-2)	40-72						
PVPR_SIVCZ	VPR PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ) (CIV)	37-74						
PVPR_SIVM1	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ142-B) ISOLATE) (SIV-MAC)	37-69						
PVPR_SIVMK	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	37-69						
PVPR_SIVMN	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ-MN ISOLATE) (SIV-MAC)	37-69						
PVPR_SIVSM	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ6/SM1 ISOLATE) (SOOTY MANGABE	37-69						
PVPU_HIV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HIV-1)	1-33						
PVPU_HIV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE) (HIV-1)	1-33						
PVPU_HIV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAZIL ISOLATE) (HIV-1)	1-14						
PVPU_HIV1HA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HAITI ISOLATE) (HIV-1)	1-11						
PVPU_HIV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	4-33						
PVPU_HIV1IR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (HIV-1)	3-34						
PVPU_HIV1IV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IVS2 ISOLATE) (HIV-1)	3-33						
PVPU_JSRV	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	116-154						
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS (LDV)	25-55						
PVPY_BIV3	ORF-Y PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	35-71						
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-319	676-705					
PV505_ROTHI	NONSTRUCTURAL PROTEIN NCVP2	HUMAN ROTAVIRUS (STRAIN IGV-60-)	198-230						
PV505_ROTPC	NONSTRUCTURAL PROTEIN NS53	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	88-119	338-392					
PV505_ROTS1	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	215-247						
PV506_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN NJ)	55-92						
PV506_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-92	313-340					
PV506_ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	55-92						

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	55-92						
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	55-92						
PVS06_ROTH1	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	55-92						
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-92	312-340					
PVS06_ROTH2S	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	55-92						
PVS06_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	55-92	313-349					
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN	64-92						
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	55-92	313-349					
PVS06_ROTSI	VP6 PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-92	313-349					
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-302						
PVS09_ROTHT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	131-159						
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	131-159						
PVS10_ROTBN	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN NCDV)	52-89						
PVS10_ROTBU	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN UK)	52-89						
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A28)	52-89						
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	52-89						
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6	52-89						
PVS10_ROTHW	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	52-89						
PVS10_ROTSI	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	52-89						
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	99-130						
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DSJONES)	346-384						
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-147						
PVT1_SFVKA	PROTEIN T1 PRECURSOR	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	147-182						
PVT2_MYXVL	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	MYXOMA VIRUS (STRAIN LAUSANNE)	261-290						
PVT2_SFVKA	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	211-249						
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	116-150						
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	166-199	505-543					
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-209						
PVTER_HSVI1	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	756-788						
PVX_SEND6	X PROTEIN	SENDAI VIRUS (STRAIN 6/94)	57-93						
PY104_ADE07	HYPOTHETICAL 10 4 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	55-83						
PY10K_MSVS	HYPOTHETICAL 10 9 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE) (MSV)	24-54						
PY10K_WDV	HYPOTHETICAL 10 KD PROTEIN	WHEAT DWARF VIRUS (WDV)	22-59						
PY119_SSVI	HYPOTHETICAL 11 9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSVI	29-64						
PY11K_PASV	HYPOTHETICAL 11 9 KD PROTEIN (ORF V1)	PANICUM STREAK VIRUS	29-61						
PY11K_ROTSI	HYPOTHETICAL 11 KD PROTEIN IN SEGMENT 511	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	53-87						
PY11K_TYDVA	HYPOTHETICAL 11 2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	28-62						
PY14K_NPVAC	HYPOTHETICAL 13 8 KD PROTEIN IN 39 KD PROTEIN 5'REG	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	65-101						
PY18K_SSVI	HYPOTHETICAL 18 0 KD PROTEIN (ORF B-166)	SULFOLOBUS VIRUS-LIKE PARTICLE SSVI	100-132						
PY20K_SSVI	HYPOTHETICAL 20 4 KD PROTEIN (ORF B-178)	SULFOLOBUS VIRUS-LIKE PARTICLE SSVI	129-167						
PY21K_MSVN	HYPOTHETICAL 21 7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE) (MSV)	122-155						
PY2_SOCMV	HYPOTHETICAL PROTEIN 2 (ORF II)	SOYBEAN CHLOROTIC MOTTLE VIRUS	99-137						
PY38K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN (ORF 2)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	250-282						
PY85K_SSVI	HYPOTHETICAL 85.7 KD PROTEIN (ORF C-792)	SULFOLOBUS VIRUS-LIKE PARTICLE SSVI	274-312	543-580					
PYB13_FOWPM	HYPOTHETICAL BAMII-ORF13 PROTEIN (FRAGMENT)	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-150						
PYDH1_HSVSC	HYPOTHETICAL 28.7 KD PROTEIN IN DHFR 3'REGION (ORF	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-244						
PYDH3_HSVSC	HYPOTHETICAL 9.5 KD PROTEIN IN DHFR 3'REGION (ORF3	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-97						
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	34-68						
PYI01_CVBM	HYPOTHETICAL PROTEIN IORF1	BOVINE CORONAVIRUS	84-122						
PYI0R_CVBF	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (IORF)	BOVINE CORONAVIRUS (STRAIN F15)	41-75	137-165					
PYI0R_CVBM	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (IORF)	BOVINE CORONAVIRUS (STRAIN MEBUS)	41-74	137-165					
PYI0R_CVTKE	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (IORF)	TURKEY ENTERIC CORONAVIRUS (TCV)	41-74	137-165					
PYKR1_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-100						
PYM02_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	250-284						
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN (ORF1)	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	93-130	166-198					
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN (ORF2)	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	23-56						
PYORJ_PVXXC	HYPOTHETICAL 12 KD PROTEIN (ORF 3) (FRAGMENT)	POTATO VIRUS X (STRAIN XC) (PVX)	7-39						

BAD ORIGINAL

PCGENE	P13CTL2IP	Alt Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PCGENE	PROTEIN	VIRUS	63-94						
PCGENE	PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	64-95						
PYORJ_WCMVM	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	237-272						
PYORJ_WCMVO	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	AVIAN ADENOVIRUS GAL1	5-34.						
PYOR3_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN (ORF 3)	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	233-263						
PYORO_TTV1	HYPOTHETICAL 71 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	91-124						
PYORM_TTV1	HYPOTHETICAL 38.6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	104-133	158-191					
PYORJ_TTV1	HYPOTHETICAL 20.2 KD PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	104-133	158-191					
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN (ORF 1	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTBV)	23-51.						
PYP24_RTDVP	HYPOTHETICAL P24 PROTEIN (ORF 1)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	180-216						
PYP47_NPVAC	HYPOTHETICAL 47.5 KD PROTEIN IN P47 3'REGION	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	13-42						
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF5	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	92-120						
PYBR2_EBV	HYPOTHETICAL BRLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	306-336						
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	21-53						
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-49						
PYVAE_VACCC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	22-53						
PYVAL_VACCV	HYPOTHETICAL 9.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-64.						
PYVBC_VACCC	HYPOTHETICAL 10.8 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	8-42						
PYVDG_VACCV	HYPOTHETICAL 10.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-35.						
PYVEF_VACCC	HYPOTHETICAL 12.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-57						
PYVFC_VACCC	HYPOTHETICAL 11.6 KD PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	8-37						
PZNFP_LYCVA	ZINC FINGER PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN PASTEUR)							
PZNFP_LYCVP	ZINC FINGER PROTEIN (FRAGMENT)								

BAD ORIGINAL

TABLE XV
RESPIRATORY SYNCYTIAL VIRUS DP107 F2 REGION ANALOG
CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSV-Z
X-YTSVI-Z
X-YTSVIT-Z
X-YTSVITI-Z
X-YTSVITIE-Z
X-YTSVITIEL-Z
X-YTSVITIELS-Z
X-YTSVITIELSN-Z
X-YTSVITIELSNI-Z
X-YTSVITIELSNIK-Z
X-YTSVITIELSNIKE-Z
X-YTSVITIELSNIKEN-Z
X-YTSVITIELSNIKENK-Z
X-YTSVITIELSNIKENKC-Z
X-YTSVITIELSNIKENKCN-Z
X-YTSVITIELSNIKENKCNG-Z
X-YTSVITIELSNIKENKCNGT-Z
X-YTSVITIELSNIKENKCNGTD-Z
X-YTSVITIELSNIKENKCNGTDA-Z
X-YTSVITIELSNIKENKCNGTDAK-Z
X-YTSVITIELSNIKENKCNGTDAKV-Z
X-YTSVITIELSNIKENKCNGTDAKVK-Z
X-YTSVITIELSNIKENKCNGTDAKVKL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLI-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELD-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKY-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVT-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLM-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQS-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVI
RESPIRATORY SYNCYTIAL VIRUS F2 DP178/DP107 REGION ANALOG
AMINO TRUNCATIONS

X-QST-Z
X-MQST-Z
X-LMQST-Z
X-LLMQST-Z
X-QLLMQST-Z
X-LQLLMQST-Z
X-ELQLLMQST-Z
X-TELQLLMQST-Z
X-VTELQLLMQST-Z
X-AVTELQLLMQST-Z
X-NAVTELQLLMQST-Z
X-KNAVTELQLLMQST-Z
X-YKNAVTELQLLMQST-Z
X-KYKNAVTELQLLMQST-Z
X-DKYKNAVTELQLLMQST-Z
X-LDKYKNAVTELQLLMQST-Z
X-ELDKYKNAVTELQLLMQST-Z
X-QELDKYKNAVTELQLLMQST-Z
X-KQELDKYKNAVTELQLLMQST-Z
X-IKQELDKYKNAVTELQLLMQST-Z
X-LIKQELDKYKNAVTELQLLMQST-Z
X-KLIKQELDKYKNAVTELQLLMQST-Z
X-VKLIKQELDKYKNAVTELQLLMQST-Z
X-KVKLIKQELDKYKNAVTELQLLMQST-Z
X-AKVKLIKQELDKYKNAVTELQLLMQST-Z
X-DAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-GTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-CNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-LSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
CARBOXY TRUNCATIONS

X-FYD-Z
X-FYDP-Z
X-FYDPL-Z
X-FYDPLV-Z
X-FYDPLVF-Z
X-FYDPLVFP-Z
X-FYDPLVFPS-Z
X-FYDPLVFPSD-Z
X-FYDPLVFPSDE-Z
X-FYDPLVFPSDEF-Z
X-FYDPLVFPSDEFD-Z
X-FYDPLVFPSDEFDA-Z
X-FYDPLVFPSDEFDAS-Z
X-FYDPLVFPSDEFDASI-Z
X-FYDPLVFPSDEFDASIS-Z
X-FYDPLVFPSDEFDASISQ-Z
X-FYDPLVFPSDEFDASISQV-Z
X-FYDPLVFPSDEFDASISQVN-Z
X-FYDPLVFPSDEFDASISQVNE-Z
X-FYDPLVFPSDEFDASISQVNEK-Z
X-FYDPLVFPSDEFDASISQVNEKI-Z
X-FYDPLVFPSDEFDASISQVNEKIN-Z
X-FYDPLVFPSDEFDASISQVNEKINQ-Z
X-FYDPLVFPSDEFDASISQVNEKINQS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLA-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAF-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFI-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIR-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRK-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSD-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDE-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDEL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier

group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVIII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
AMINO TRUNCATIONS

X-DELL-Z
X-SDELL-Z
X-KSDELL-Z
X-RKSDELL-Z
X-IRKSDELL-Z
X-FIRKSDELL-Z
X-AFIRKSDELL-Z
X-LAFIRKSDELL-Z
X-SLAFIRKSDELL-Z
X-QSLAFIRKSDELL-Z
X-NQSLAFIRKSDELL-Z
X-INQSLAFIRKSDELL-Z
X-KINQSLAFIRKSDELL-Z
X-EKINQSLAFIRKSDELL-Z
X-NEKINQSLAFIRKSDELL-Z
X-VNEKINQSLAFIRKSDELL-Z
X-QVNEKINQSLAFIRKSDELL-Z
X-SQVNEKINQSLAFIRKSDELL-Z
X-ISQVNEKINQSLAFIRKSDELL-Z
X-SISQVNEKINQSLAFIRKSDELL-Z
X-ASISQVNEKINQSLAFIRKSDELL-Z
X-DASISQVNEKINQSLAFIRKSDELL-Z
X-FDASISQVNEKINQSLAFIRKSDELL-Z
X-EFDASISQVNEKINQSLAFIRKSDELL-Z
X-DEFDASISQVNEKINQSLAFIRKSDELL-Z
X-SDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-FPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-VFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-LVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-DPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-YDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XIX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
CARBOXY TRUNCATIONS

X-ITL-Z
X-ITLN-Z
X-ITLNN-Z
X-ITLNNS-Z
X-ITLNNSV-Z
X-ITLNNSVA-Z
X-ITLNNSVAL-Z
X-ITLNNSVALD-Z
X-ITLNNSVALDP-Z
X-ITLNNSVALDPI-Z
X-ITLNNSVALDPID-Z
X-ITLNNSVALDPIDI-Z
X-ITLNNSVALDPIDIS-Z
X-ITLNNSVALDPIDISI-Z
X-ITLNNSVALDPIDISIE-Z
X-ITLNNSVALDPIDISIEL-Z
X-ITLNNSVALDPIDISIELN-Z
X-ITLNNSVALDPIDISIELNK-Z
X-ITLNNSVALDPIDISIELNKA-Z
X-ITLNNSVALDPIDISIELNKAK-Z
X-ITLNNSVALDPIDISIELNKAKS-Z
X-ITLNNSVALDPIDISIELNKAKSD-Z
X-ITLNNSVALDPIDISIELNKAKSDL-Z
X-ITLNNSVALDPIDISIELNKAKSDLE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEES-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESK-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEW-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWI-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
AMINO TRUNCATIONS

X-RRS-Z
X-IRRS-Z
X-WIRRS-Z
X-EWIRRS-Z
X-KEWIRRS-Z
X-SKEWIRRS-Z
X-ESKEWIRRS-Z
X-EESKEWIRRS-Z
X-LEESKEWIRRS-Z
X-DLEESKEWIRRS-Z
X-SDLEESKEWIRRS-Z
X-KSDLEESKEWIRRS-Z
X-AKSDLEESKEWIRRS-Z
X-KAKSDLEESKEWIRRS-Z
X-NKAKSDLEESKEWIRRS-Z
X-LNKAKSDLEESKEWIRRS-Z
X-ELNKAKSDLEESKEWIRRS-Z
X-IELNKAKSDLEESKEWIRRS-Z
X-SIELNKAKSDLEESKEWIRRS-Z
X-ISIELNKAKSDLEESKEWIRRS-Z
X-DISIELNKAKSDLEESKEWIRRS-Z
X-IDISIELNKAKSDLEESKEWIRRS-Z
X-PIDISIELNKAKSDLEESKEWIRRS-Z
X-DPIDISIELNKAKSDLEESKEWIRRS-Z
X-LDPIDISIELNKAKSDLEESKEWIRRS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXI
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
CARBOXY TRUNCATIONS

X-ALG-Z
X-ALGV-Z
X-ALGVA-Z
X-ALGVAT-Z
X-ALGVATS-Z
X-ALGVATSA-Z
X-ALGVATSAQ-Z
X-ALGVATSAQI-Z
X-ALGVATSAQIT-Z
X-ALGVATSAQITA-Z
X-ALGVATSAQITAA-Z
X-ALGVATSAQITAAV-Z
X-ALGVATSAQITAAVA-Z
X-ALGVATSAQITAAVAL-Z
X-ALGVATSAQITAAVALV-Z
X-ALGVATSAQITAAVALVE-Z
X-ALGVATSAQITAAVALVEA-Z
X-ALGVATSAQITAAVALVEAK-Z
X-ALGVATSAQITAAVALVEAKQ-Z
X-ALGVATSAQITAAVALVEAKQA-Z
X-ALGVATSAQITAAVALVEAKQAR-Z
X-ALGVATSAQITAAVALVEAKQARS-Z
X-ALGVATSAQITAAVALVEAKQARSD-Z
X-ALGVATSAQITAAVALVEAKQARSDI-Z
X-ALGVATSAQITAAVALVEAKQARSDIE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKL-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEA-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAI-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAIR-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXII
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
AMINO TRUNCATIONS

X-IRD-Z
X-AIRD-Z
X-EAIRD-Z
X-KEAIRD-Z
X-LKEAIRD-Z
X-KLKEAIRD-Z
X-EKLKEAIRD-Z
X-IEKLKEAIRD-Z
X-DIEKLKEAIRD-Z
X-SDIEKLKEAIRD-Z
X-RSDIEKLKEAIRD-Z
X-ARSDIEKLKEAIRD-Z
X-QARSDIEKLKEAIRD-Z
X-KQARSDIEKLKEAIRD-Z
X-AKQARSDIEKLKEAIRD-Z
X-EAKQARSDIEKLKEAIRD-Z
X-VEAKQARSDIEKLKEAIRD-Z
X-LVEAKQARSDIEKLKEAIRD-Z
X-ALVEAKQARSDIEKLKEAIRD-Z
X-VALVEAKQARSDIEKLKEAIRD-Z
X-AVALVEAKQARSDIEKLKEAIRD-Z
X-AAVALVEAKQARSDIEKLKEAIRD-Z
X-TAAVALVEAKQARSDIEKLKEAIRD-Z
X-ITAAVALVEAKQARSDIEKLKEAIRD-Z
X-QITAAVALVEAKQARSDIEKLKEAIRD-Z
X-AQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-SAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-TSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-ATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-VATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-GVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-LGVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXIII
REPRESENTATIVE DP107/DP178 ANALOG ANTIVIRAL PEPTIDES

Anti-Respiratory syncytial virus peptides

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z

Anti-human parainfluenza virus 3 peptides

X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRSN-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRSNQ-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRSNQK-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRSNQKL-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRSNQKLD-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRSNQKLDS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRSNQKLDSI-Z
X-LDPIDISIELNKAKSDLEESKEWIRRSNQKLDSIG-Z
X-DPIDISIELNKAKSDLEESKEWIRRSNQKLDSIGN-Z
X-PIDISIELNKAKSDLEESKEWIRRSNQKLDSIGNW-Z
X-IDISIELNKAKSDLEESKEWIRRSNQKLDSIGNWH-Z
X-DISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQ-Z
X-ISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQS-Z
X-SIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSS-Z
X-IELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSST-Z
X-ELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSSTT-Z
X-TAAVALVEAKQARSDIEKLKEAIRDTNKAVQSVQS-Z

X-AVALVEAKQARSDIEKLKEAIRDTNKAVQSVQSSI-Z
X-LVEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNL-Z
X-VEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLI-Z
X-EAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIV-Z
X-AKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVA-Z
X-KQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAI-Z
X-QARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIK-Z
X-ARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKS-Z
X-RSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSV-Z
X-SDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQ-Z
X-KLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVN-Z
X-LKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNK-Z
X-AIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNKEIV-Z

Anti-simian immunodeficiency virus peptides

X-WQEWERKVDFLEENITALLEEAQIQQEKNMYELQK-Z
X-QEWERKVDFLEENITALLEEAQIQQEKNMYELQKL-Z
X-EWERKVDFLEENITALLEEAQIQQEKNMYELQKLN-Z
X-WERKVDFLEENITALLEEAQIQQEKNMYELQKLNS-Z
X-ERKVDFLEENITALLEEAQIQQEKNMYELQKLNSW-Z
X-RKVDFLEENITALLEEAQIQQEKNMYELQKLNSWD-Z
X-KVDFLEENITALLEEAQIQQEKNMYELQKLNSWDV-Z
X-VDFLEENITALLEEAQIQQEKNMYELQKLNSWDVF-Z
X-DFLEENITALLEEAQIQQEKNMYELQKLNSWDVFG-Z
X-FLEENITALLEEAQIQQEKNMYELQKLNSWDVFGN-Z

Anti-measles virus peptides

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEAKELL-Z
X-HRIDLGPPISLERLDVGTNLGNAIAKLEAKELLE-Z
X-RIDLGPPISLERLDVGTNLGNAIAKLEAKELLES-Z
X-IDLGPPISLERLDVGTNLGNAIAKLEAKELLESS-Z
X-DLGPPISLERLDVGTNLGNAIAKLEAKELLESSD-Z
X-LGPPISLERLDVGTNLGNAIAKLEAKELLESSDQ-Z
X-GPPISLERLDVGTNLGNAIAKLEAKELLESSDQI-Z
X-PPISLERLDVGTNLGNAIAKLEAKELLESSDQIL-Z
X-PISLERLDVGTNLGNAIAKLEAKELLESSDQILR-Z
X-SLERLDVGTNLGNAIAKLEAKELLESSDQILRSM-Z
X-LERLDVGTNLGNAIAKLEAKELLESSDQILRSMK-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

5.4. SYNTHESIS OF PEPTIDES

The peptides of the invention may be synthesized or prepared by techniques well known in the art. See, for example, Creighton, 1983, Proteins: Structures and Molecular Principles, W.H. Freeman and Co., NY, which is incorporated herein by reference in its entirety. Short peptides, for example, can be synthesized on a solid support or in solution. Longer peptides may be made using recombinant DNA techniques. Here, the nucleotide sequences encoding the peptides of the invention may be synthesized, and/or cloned, and expressed according to techniques well known to those of ordinary skill in the art. See, for example, Sambrook, et al., 1989, Molecular Cloning, A Laboratory Manual, Vols. 1-3, Cold Spring Harbor Press, NY.

The peptides of the invention may alternatively be synthesized such that one or more of the bonds which link the amino acid residues of the peptides are non-peptide bonds. These alternative non-peptide bonds may be formed by utilizing reactions well known to those in the art, and may include, but are not limited to imino, ester, hydrazide, semicarbazide, and azo bonds, to name but a few. In yet another embodiment of the invention, peptides comprising the sequences described above may be synthesized with additional chemical groups present at their amino and/or carboxy termini, such that, for example, the stability, bioavailability, and/or inhibitory activity of the peptides is enhanced. For example, hydrophobic groups such as carbobenzoxyl, dansyl, or t-butyloxycarbonyl groups, may be added to the peptides' amino termini. Likewise, an acetyl group or a 9-fluorenylmethoxy-carbonyl group may be placed at the peptides' amino termini. (See "X" in Tables I to IV,

above.) Additionally, the hydrophobic group, t-butyloxycarbonyl, or an amido group may be added to the peptides' carboxy termini. (See "Z" in Tables I to IV, above.)

Further, the peptides of the invention may be synthesized such that their steric configuration is altered. For example, the D-isomer of one or more of the amino acid residues of the peptide may be used, rather than the usual L-isomer.

Still further, at least one of the amino acid residues of the peptides of the invention may be substituted by one of the well known non-naturally occurring amino acid residues. Alterations such as these may serve to increase the stability, bioavailability and/or inhibitory action of the peptides of the invention.

Any of the peptides described above may, additionally, have a macromolecular carrier group covalently attached to their amino and/or carboxy termini. Such macromolecular carrier groups may include, for example, lipid-fatty acid conjugates, polyethylene glycol, carbohydrates or additional peptides. "X", in Tables I to IV, above, may therefore additionally represent any of the above macromolecular carrier groups covalently attached to the amino terminus of a peptide, with an additional peptide group being preferred. Likewise, "Z", in Tables I to IV, may additionally represent any of the macromolecular carrier groups described above.

5.5. ASSAYS FOR ANTI-MEMBRANE FUSION ACTIVITY

Described herein, are methods for ability of a compound, such as the peptides of the invention, to inhibit membrane fusion events. Specifically, assays for cell fusion events are described in Section 5.5.1,

below, and assays for antiviral activity are described in Section 5.5.2, below.

5.5.1 ASSAYS FOR CELL FUSION EVENTS

Assays for cell fusion events are well known to those of skill in the art, and may be used in conjunction, for example, with the peptides of the invention to test the peptides' antifusogenic capabilities.

Cell fusion assays are generally performed in vitro. Such an assay may comprise culturing cells which, in the absence of any treatment would undergo an observable level of syncytial formation. For example, uninfected cells may be incubated in the presence of cells chronically infected with a virus that induces cell fusion. Such viruses may include, but are not limited to, HIV, SIV, or respiratory syncytial virus.

For the assay, cells are incubated in the presence of a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added.

Standard conditions for culturing cells, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytial formation. Well known stains, such as crystal violet stain, may be used to facilitate the visualization of syncytial formation.

5.5.2 ASSAYS FOR ANTIVIRAL ACTIVITY

The antiviral activity exhibited by the peptides of the invention may be measured, for example, by

easily performed in vitro assays, such as those described below, which can test the peptides' ability to inhibit syncytia formation, or their ability to inhibit infection by cell-free virus. Using these assays, such parameters as the relative antiviral activity of the peptides, exhibit against a given strain of virus and/or the strain specific inhibitory activity of the peptide can be determined.

A cell fusion assay may be utilized to test the peptides' ability to inhibit viral-induced, such as HIV-induced, syncytia formation in vitro. Such an assay may comprise culturing uninfected cells in the presence of cells chronically infected with a syncytial-inducing virus and a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added. Standard conditions for culturing, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytia formation. Well known stains, such as crystal violet stain, may be used to facilitate syncytial visualization. Taking HIV as an example, such an assay would comprise CD-4$^+$ cells (such as Molt or CEM cells, for example) cultured in the presence of chronically HIV-infected cells and a peptide to be assayed.

Other well known characteristics of viral infection may also be assayed to test a peptide's antiviral capabilities. Once again taking HIV as an example, a reverse transcriptase (RT) assay may be utilized to test the peptides' ability to inhibit infection of CD-4$^+$ cells by cell-free HIV. Such an assay may comprise culturing an appropriate

concentration (i.e., $TCID_{50}$) of virus and CD-4$^+$ cells in the presence of the peptide to be tested. Culture conditions well known to those in the art are used. As above, a range of peptide concentrations may be used, in addition to a control culture wherein no peptide has been added. After incubation for an appropriate period (e.g., 7 days) of culturing, a cell-free supernatant is prepared, using standard procedures, and tested for the present of RT activity as a measure of successful infection. The RT activity may be tested using standard techniques such as those described by, for example, Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and/or Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). These references are incorporated herein by reference in their entirety.

Standard methods which are well-known to those of skill in the art may be utilized for assaying non-retroviral activity. See, for example, Pringle et al. (Pringle, C.R. et al., 1985, J. Medical Virology 17:377-386) for a discussion of respiratory syncytial virus and parainfluenza virus activity assay techniques. Further, see, for example, "Zinsser Microbiology", 1988, Joklik, W.K. et al., eds., Appleton & Lange, Norwalk, CT, 19th ed., for a general review of such techniques. These references are incorporated by reference herein in their entirety. In addition, the Examples presented below, in Sections 17, 18, 26 and 27 each provide additional assays for the testing of a compound's antiviral capability.

In vivo assays may also be utilized to test, for example, the antiviral activity of the peptides of the invention. To test for anti-HIV activity, for example, the in vivo model described in Barnett et al. (Barnett, S.W. et al., 1994, Science 266:642-646) may be used.

Additionally, anti-RSV activity can be assayed in vivo via well known mouse models. For example, RSV can be administered intranasally to mice of various inbred strains. Virus replicates in lungs of all strains, but the highest titers are obtained in P/N, C57L/N and DBA/2N mice. Infection of BALB/c mice produces an asymptomatic bronchiolitis characterized by lymphocytic infiltrates and pulmonary virus titers of 10^4 to 10^5 pfu/g of lung tissue (Taylor, G. et al., 1984, Infect. Immun. 43:649-655).

Cotton rat models of RSV are also well known. Virus replicates to high titer in the nose and lungs of the cotton rat but produces few if any signs of inflammation.

5.6. USES OF THE PEPTIDES OF THE INVENTION

The peptides of the invention may be utilized as antifusogenic or antiviral compounds, or as compounds which modulate intracellular processes involving coiled coil peptide structures. Further, such peptides may be used to identify agents which exhibit antifusogenic, antiviral or intracellular modulatory activity. Still further, the peptides of the invention may be utilized as organism or viral type/subtype-specific diagnostic tools.

The antifusogenic capability of the peptides of the invention may additionally be utilized to inhibit or treat/ameliorate symptoms caused by processes involving membrane fusion events. Such events may include, for example, virus transmission via cell-cell fusion, abnormal neurotransmitter exchange via cell-fusion, and sperm-egg fusion. Further, the peptides of the invention may be used to inhibit free viral, such as retroviral, particularly HIV, transmission to uninfected cells wherein such viral infection involves membrane fusion events or involves fusion of a viral

structure with a cell membrane. Among the intracellular disorders involving coiled coil peptides structures which may be ameliorated by the peptides of the invention are disorders involving, for example, bacterial toxins.

With respect to antiviral activity, the viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to all strains of the viruses listed above, in Tables V through VII, and IX through XIV.

These viruses include, for example, human retroviruses, particularly HIV-1 and HIV-2 and the human T-lymphocyte viruses (HTLV-I and II). The non-human retroviruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to bovine leukosis virus, feline sarcoma and leukemia viruses, simian immunodeficiency, sarcoma and leukemia viruses, and sheep progress pneumonia viruses.

Non retroviral viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to human respiratory syncytial virus, canine distemper virus, newcastle disease virus, human parainfluenza virus, influenza viruses, measles viruses, Epstein-Barr viruses, hepatitis B viruses, and simian Mason-Pfizer viruses.

Non enveloped viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to picornaviruses such as polio viruses, hepatitis A virus, enterovirus, echoviruses and coxsackie viruses, papovaviruses such as papilloma virus, parvoviruses, adenoviruses and reoviruses.

As discussed more fully, below, in Section 5.5.1 and in the Example presented, below, in Section 8, DP107, DP178, DP107 analog and DP178 analog peptides form non-covalent protein-protein interactions which

are required for normal activity of the virus. Thus, the peptides of the invention may also be utilized as components in assays for the identification of compounds that interfere with such protein-protein interactions and may, therefore, act as antiviral agents. These assays are discussed, below, in Section 5.5.1.

As demonstrated in the Example presented below in Section 6, the antiviral activity of the peptides of the invention may show a pronounced type and subtype specificity, i.e., specific peptides may be effective in inhibiting the activity of only specific viruses. This feature of the invention presents many advantages. One such advantage, for example, lies in the field of diagnostics, wherein one can use the antiviral specificity of the peptide of the invention to ascertain the identity of a viral isolate. With respect to HIV, one may easily determine whether a viral isolate consists of an HIV-1 or HIV-2 strain. For example, uninfected CD-4$^+$ cells may be co-infected with an isolate which has been identified as containing HIV the DP178 (SEQ ID:1) peptide, after which the retroviral activity of cell supernatants may be assayed, using, for example, the techniques described above in Section 5.2. Those isolates whose retroviral activity is completely or nearly completely inhibited contain HIV-1. Those isolates whose viral activity is unchanged or only reduced by a small amount, may be considered to not contain HIV-1. Such an isolate may then be treated with one or more of the other DP178 peptides of the invention, and subsequently be tested for its viral activity in order to determine the identify of the viral isolate. The DP107 and DP178 analogs of the invention may also be utilized in a diagnostic capacity specific to the type and subtype of virus or organism in which the specific

peptide sequence is found. A diagnostic procedure as described, above, for DP178, may be used in conjunction with the DP107/DP178 analog of interest.

5.5.1. SCREENING ASSAYS

As demonstrated in the Example presented in Section 8, below, DP107 and DP178 portions of the TM protein gp41 form non-covalent protein-protein interactions. As is also demonstrated, the maintenance of such interactions is necessary for normal viral infectivity. Thus, compounds which bind DP107, bind DP178, and/or act to disrupt normal DP107/DP178 protein-protein interactions may act as antifusogenic, antiviral or cellular modulatory agents. Described below are assays for the identification of such compounds. Note that, while, for ease and clarity of discussion, DP107 and DP178 peptides will be used as components of the assays described, but it is to be understood that any of the DP107 analog or DP178 analog peptides described, above, in Sections 5.1 through 5.3 may also be utilized as part of these screens for compounds.

Compounds which may be tested for an ability to bind DP107, DP178, and/or disrupt DP107/DP178 interactions, and which therefore, potentially represent antifusogenic, antiviral or intracellular modulatory compounds, include, but are not limited to, peptides made of D- and/or L-configuration amino acids (in, for example, the form of random peptide libraries; see Lam, K.S. et al., 1991, Nature 354:82-84), phosphopeptides (in, for example, the form of random or partially degenerate, directed phosphopeptide libraries; see, for example, Songyang, Z. et al., 1993, Cell 72:767-778), antibodies, and small organic or inorganic molecules. Synthetic compounds, natural products, and other sources of

potentially effective materials may be screened in a variety of ways, as described in this Section.

The compounds, antibodies, or other molecules identified may be tested, for example, for an ability to inhibit cell fusion or viral activity, utilizing, for example, assays such as those described, above, in Section 5.5.

Among the peptides which may be tested are soluble peptides comprising DP107 and/or DP178 domains, and peptides comprising DP107 and/or DP178 domains having one or more mutations within one or both of the domains, such as the M41-P peptide described, below, in the Example presented in Section 8, which contains a isoleucine to proline mutation within the DP178 sequence.

In one embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP107 peptide for a time sufficient to allow binding of the compound to the DP107 peptide;

(b) removing non-bound compounds; and

(c) determining the presence of the compound bound to the DP107 peptide,

thereby identifying an agent to be tested for antiviral ability.

In a second embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP178 peptide for a time sufficient to allow binding of the compound to the DP178 peptide;

(b) removing non-bound compounds; and

(c) determining the presence of the compound bound to the DP178 peptide, thereby identifying an agent to be tested for antiviral ability.

One method utilizing these types of approaches that may be pursued in the isolation of such DP107-binding or DP178-binding compounds is an assay which would include the attachment of either the DP107 or the DP178 peptide to a solid matrix, such as, for example, agarose or plastic beads, microtiter plate wells, petri dishes, or membranes composed of, for example, nylon or nitrocellulose. In such an assay system, either the DP107 or DP178 protein may be anchored onto a solid surface, and the compound, or test substance, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored component may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying.

Alternatively, an immobilized antibody, preferably a monoclonal antibody, specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

In order to conduct the assay, the labeled compound is added to the coated surface containing the anchored DP107 or DP178 peptide. After the reaction is complete, unreacted components are removed (e.g., by washing) under conditions such that any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the compound is pre-labeled, the detection of label immobilized on the surface indicates that

complexes were formed. Where the labeled component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the compound (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody).

Alternatively, such an assay can be conducted in a liquid phase, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for DP107 or DP178, whichever is appropriate for the given assay, or ab antibody specific for the compound, i.e., the test substance, in order to anchor any complexes formed in solution, and a labeled antibody specific for the other member of the complex to detect anchored complexes.

By utilizing procedures such as this, large numbers of types of molecules may be simultaneously screened for DP107 or DP178-binding capability, and thus potential antiviral activity.

Further, compounds may be screened for an ability to inhibit the formation of or, alternatively, disrupt DP107/DP178 complexes. Such compounds may then be tested for antifusogenic, antiviral or intercellular modulatory capability. For ease of description, DP107 and DP178 will be referred to as "binding partners." Compounds that disrupt such interactions may exhibit antiviral activity. Such compounds may include, but are not limited to molecules such as antibodies, peptides, and the like described above.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between the DP107 and DP178 peptides involves preparing a reaction mixture containing peptides under conditions and for a time sufficient to allow the two peptides to interact and bind, thus forming a complex.

In order to test a compound for disruptive activity, the reaction is conducted in the presence and absence of the test compound, i.e., the test compound may be initially included in the reaction mixture, or added at a time subsequent to the addition of one of the binding partners; controls are incubated without the test compound or with a placebo. The formation of any complexes between the binding partners is then detected. The formation of a complex in the control reaction, but not in the reaction mixture containing the test compound indicates that the compound interferes with the interaction of the DP107 and DP178 peptides.

The assay for compounds that interfere with the interaction of the binding partners can be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring one of the binding partners onto a solid phase and detecting complexes anchored on the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the binding partners, e.g., by competition, can be identified by conducting the reaction in the presence of the test substance; i.e., by adding the test substance to the reaction mixture prior to or simultaneously with the binding partners. On the other hand, test compounds that disrupt preformed complexes, e.g. compounds with higher binding constants that displace one of the binding partners from the complex, can be tested by adding the test compound to the reaction mixture after complexes have

been formed. The various formats are described briefly below.

In a heterogeneous assay system, one binding partner, e.g., either the DP107 or DP178 peptide, is anchored onto a solid surface, and its binding partner, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored species may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying. Alternatively, an immobilized antibody specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

In order to conduct the assay, the binding partner of the immobilized species is added to the coated surface with or without the test compound. After the reaction is complete, unreacted components are removed (e.g., by washing) and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the binding partner was pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the binding partner is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the binding partner (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which inhibit complex formation or which disrupt preformed complexes can be detected.

Alternatively, the reaction can be conducted in a liquid phase in the presence or absence of the test compound, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for one binding partner to anchor any complexes formed in solution, and a labeled antibody specific for the other binding partner to detect anchored complexes. Again, depending upon the order of addition of reactants to the liquid phase, test compounds which inhibit complex or which disrupt preformed complexes can be identified.

In an alternate embodiment of the invention, a homogeneous assay can be used. In this approach, a preformed complex of the DP107 and DP178 peptides is prepared in which one of the binding partners is labeled, but the signal generated by the label is quenched due to complex formation (see, e.g., U.S. Patent No. 4,109,496 by Rubenstein which utilizes this approach for immunoassays). The addition of a test substance that competes with and displaces one of the binding partners from the preformed complex will result in the generation of a signal above background. In this way, test substances which disrupt DP-107/ DP-178 protein-protein interaction can be identified.

In an alternative screening assay, test compounds may be assayed for the their ability to disrupt a DP178/DP107 interaction, as measured immunometrically using an antibody specifically reactive to a DP107/DP178 complex (i.e., an antibody that recognizes neither DP107 nor DP178 individually). Such an assay acts as a competition assay, and is based on techniques well known to those of skill in the art.

The above competition assay may be described, by way of example, and not by way of limitation, by using the DP178 and M41Δ178 peptides and by assaying test

compounds for the disruption of the complexes formed by these two peptides by immunometrically visualizing DP178/M41Δ178 complexes via the human recombinant Fab, Fab-d, as described, below, in the Example presented in Section 8. M41Δ178 is a maltose binding fusion protein containing a gp41 region having its DP178 domain deleted, and is described, below, in the Example presented in Section 8.

Utilizing such an assay, M41Δ178 may be immobilized onto solid supports such as microtiter wells. A series of dilutions of a test compound may then be added to each M41Δ178-containing well in the presence of a constant concentration of DP-178 peptide. After incubation, at, for example, room temperature for one hour, unbound DP-178 and test compound are removed from the wells and wells are then incubated with the DP178/M41Δ178-specific Fab-d antibody. After incubation and washing, unbound Fab-d is removed from the plates and bound Fab-d is quantitated. A no-inhibitor control should also be conducted. Test compounds showing an ability to disrupt DP178/M41Δ178 complex formation are identified by their concentration-dependent decrease in the level of Fab-d binding.

A variation of such an assay may be utilized to perform a rapid, high-throughput binding assay which is capable of directly measuring DP178 binding to M41Δ178 for the determination of binding constants of the ligand of inhibitory constants for competitors of DP178 binding.

Such an assay takes advantage of accepted radioligand and receptor binding principles. (See, for example, Yamamura, H.I. et al., 1985, "Neurotransmitter Receptor Binding", 2nd ed., Raven Press, NY.) As above, M41Δ178 is immobilized onto a solid support such as a microtiter well. DP178

binding to M41Δ178 is then quantitated by measuring the fraction of DP178 that is bound as ^{125}I-DP178 and calculating the total amount bound using a value for specific activity (dpm/μg peptide) determined for each labeled DP178 preparation. Specific binding to M41Δ178 is defined as the difference of the binding of the labeled DP178 preparation in the microtiter wells (totals) and the binding in identical wells containing, in addition, excess unlabeled DP178 (nonspecifics).

5.5 PHARMACEUTICAL FORMULATIONS, DOSAGES AND MODES OF ADMINISTRATION

The peptides of the invention may be administered using techniques well known to those in the art. Preferably, agents are formulated and administered systemically. Techniques for formulation and administration may be found in "Remington's Pharmaceutical Sciences", 18th ed., 1990, Mack Publishing Co., Easton, PA. Suitable routes may include oral, rectal, transmucosal, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as, intrathecal, direct intraventricular, intravenous, intraperitoneal, intranasal, or intraocular injections, just to name a few. For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks' solution, Ringer's solution, or physiological saline buffer. For such transmucosal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art.

In instances wherein intracellular administration of the peptides of the invention or other inhibitory

agents is preferred, techniques well known to those of ordinary skill in the art may be utilized. For example, such agents may be encapsulated into liposomes, then administered as described above. Liposomes are spherical lipid bilayers with aqueous interiors. All molecules present in an aqueous solution at the time of liposome formation are incorporated into the aqueous interior. The liposomal contents are both protected from the external microenvironment and, because liposomes fuse with cell membranes, are effectively delivered into the cell cytoplasm. Additionally, due to their hydrophobicity, when small molecules are to be administered, direct intracellular administration may be achieved.

Nucleotide sequences encoding the peptides of the invention which are to be intracellularly administered may be expressed in cells of interest, using techniques well known to those of skill in the art. For example, expression vectors derived from viruses such as retroviruses, vaccinia viruses, adeno-associated viruses, herpes viruses, or bovine papilloma viruses, may be used for delivery and expression of such nucleotide sequences into the targeted cell population. Methods for the construction of such vectors and expression constructs are well known. See, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Press, Cold Spring Harbor NY, and Ausubel et al., 1989, Current Protocols in Molecular Biology, Greene Publishing Associates and Wiley Interscience, NY.

With respect to HIV, peptides of the invention, particularly DP107 and DP178, may be used as therapeutics in the treatment of AIDS. In addition, the peptides may be used as prophylactic measures in previously uninfected individuals after acute exposure

to an HIV virus. Examples of such prophylactic use of the peptides may include, but are not limited to, prevention of virus transmission from mother to infant and other settings where the likelihood of HIV transmission exists, such as, for example, accidents in health care settings wherein workers are exposed to HIV-containing blood products. The successful use of such treatments do not rely upon the generation of a host immune response directed against such peptides.

Effective dosages of the peptides of the invention to be administered may be determined through procedures well known to those in the art which address such parameters as biological half-life, bioavailability, and toxicity. Given the data presented below in Section 6, DP178, for example, may prove efficacious in vivo at doses required to achieve circulating levels of about 1 to about 10 ng per ml of peptide.

A therapeutically effective dose refers to that amount of the compound sufficient to result in amelioration of symptoms or a prolongation of survival in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the LD_{50} (the dose lethal to 50% of the population) and the ED50 (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio LD_{50}/ED_{50}. Compounds which exhibit large therapeutic indices are preferred. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED50 with

little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For any compound used in the method of the invention, the therapeutically effective dose can be estimated initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range that includes the IC_{50} (e.g., the concentration of the test compound which achieves a half-maximal inhibition of the fusogenic event, such as a half-maximal inhibition of viral infection relative to the amount of the event in the absence of the test compound) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels in plasma may be measured, for example, by high performance liquid chromatography (HPLC).

The peptides of the invention may, further, serve the role of a prophylactic vaccine, wherein the host raises antibodies against the peptides of the invention, which then serve to neutralize HIV viruses by, for example, inhibiting further HIV infection.

Administration of the peptides of the invention as a prophylactic vaccine, therefore, would comprise administering to a host a concentration of peptides effective in raising an immune response which is sufficient to neutralize HIV, by, for example, inhibiting HIV ability to infect cells. The exact concentration will depend upon the specific peptide to be administered, but may be determined by using standard techniques for assaying the development of an immune response which are well known to those of ordinary skill in the art. The peptides to be used as vaccines are usually administered intramuscularly.

The peptides may be formulated with a suitable adjuvant in order to enhance the immunological

response. Such adjuvants may include, but are not limited to mineral gels such as aluminum hydroxide; surface active substances such as lysolecithin, pluronic polyols, polyanions; other peptides; oil emulsions; and potentially useful human adjuvants such as BCG and Corynebacterium parvum. Many methods may be used to introduce the vaccine formulations described here. These methods include but are not limited to oral, intradermal, intramuscular, intraperitoneal, intravenous, subcutaneous, and intranasal routes.

Alternatively, an effective concentration of polyclonal or monoclonal antibodies raised against the peptides of the invention may be administered to a host so that no uninfected cells become infected by HIV. The exact concentration of such antibodies will vary according to each specific antibody preparation, but may be determined using standard techniques well known to those of ordinary skill in the art. Administration of the antibodies may be accomplished using a variety of techniques, including, but not limited to those described in this section.

For all such treatments described above, the exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. (See e.g. Fingl et al., 1975, in "The Pharmacological Basis of Therapeutics", Ch. 1 p1).

It should be noted that the attending physician would know how to and when to terminate, interrupt, or adjust administration due to toxicity, or to organ dysfunctions. Conversely, the attending physician would also know to adjust treatment to higher levels if the clinical response were not adequate (precluding toxicity). The magnitude of an administrated dose in the management of the oncogenic disorder of interest

will vary with the severity of the condition to be treated and the route of administration. The dose and perhaps dose frequency, will also vary according to the age, body weight, and response of the individual patient. A program comparable to that discussed above may be used in veterinary medicine.

Use of pharmaceutically acceptable carriers to formulate the compounds herein disclosed for the practice of the invention into dosages suitable for systemic administration is within the scope of the invention. With proper choice of carrier and suitable manufacturing practice, the compositions of the present invention, in particular, those formulated as solutions, may be administered parenterally, such as by intravenous injection. The compounds can be formulated readily using pharmaceutically acceptable carriers well known in the art into dosages suitable for oral administration. Such carriers enable the compounds of the invention to be formulated as tablets, pills, capsules, liquids, gels, syrups, slurries, suspensions and the like, for oral ingestion by a patient to be treated.

Pharmaceutical compositions suitable for use in the present invention include compositions wherein the active ingredients are contained in an effective amount to achieve its intended purpose. Determination of the effective amounts is well within the capability of those skilled in the art, especially in light of the detailed disclosure provided herein.

In addition to the active ingredients, these pharmaceutical compositions may contain suitable pharmaceutically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. The preparations formulated

for oral administration may be in the form of tablets, dragees, capsules, or solutions.

The pharmaceutical compositions of the present invention may be manufactured in a manner that is itself known, e.g., by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes.

Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. Optionally, the suspension may also contain suitable stabilizers or agents which increase the solubility of the compounds to allow for the preparation of highly concentrated solutions.

Pharmaceutical preparations for oral use can be obtained by combining the active compounds with solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients are, in particular, fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth, methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be

added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate.

Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or dragee coatings for identification or to characterize different combinations of active compound doses.

Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added.

6. EXAMPLE: DP178 (SEQ ID:1) IS A POTENT INHIBITOR OF HIV-1 INFECTION

In this example, DP178 (SEQ ID:1) is shown to be a potent inhibitor of HIV-1 mediated CD-4$^+$ cell-cell fusion and infection by cell free virus. In the fusion assay, this peptide completely blocks virus induced syncytia formation at concentrations of from 1-10 ng/ml. In the infectivity assay the inhibitory concentration is somewhat higher, blocking infection at 90ng/ml. It is further shown that DP178 (SEQ ID:1) shows that the antiviral activity of DP178 (SEQ ID:1)

is highly specific for HIV-1. Additionally, a synthetic peptide, DP-185 (SEQ ID:3), representing a HIV-1-derived DP178 homolog is also found to block HIV-1-mediated syncytia formation.

6.1. MATERIALS AND METHODS

6.1.1. PEPTIDE SYNTHESIS

Peptides were synthesized using Fast Moc chemistry on an Applied Biosystems Model 431A peptide synthesizer. Generally, unless otherwise noted, the peptides contained amidated carboxy termini and acetylated amino termini. Amidated peptides were prepared using Rink resin (Advanced Chemtech) while peptides containing free carboxy termini were synthesized on Wang (p-alkoxy-benzyl-alcohol) resin (Bachem). First residues were double coupled to the appropriate resin and subsequent residues were single coupled. Each coupling step was followed by acetic anhydride capping. Peptides were cleaved from the resin by treatment with trifluoracetic acid (TFA) (10ml), H_2O (0.5ml), thioanisole (0.5ml), ethanedithiol (0.25ml), and crystalline phenol (0.75g). Purification was carried out by reverse phase HPLC. Approximately 50mg samples of crude peptide were chromatographed on a Waters Delta Pak C18 column (19mm x 30cm, 15μ spherical) with a linear gradient; H_2O/acetonitrile 0.1% TFA. Lyophilized peptides were stored desiccated and peptide solutions were made in water at about 1mg/ml. Electrospray mass spectrometry yielded the following results: DP178 (SEQ ID:1):4491.87 (calculated 4491.94); DP-180 (SEQ ID:2):4491.45 (calculated 4491.94); DP-185 (SEQ ID:3):not done (calculated 4546.97).

6.1.2. VIRUS

The HIV-1_{LAI} virus was obtained from R. Gallo (Popovic, M. et al., 1984, Science 224:497-508) and propagated in CEM cells cultured in RPMI 1640 containing 10% fetal calf serum. Supernatant from the infected CEM cells was passed through a 0.2μm filter and the infectious titer estimated in a microinfectivity assay using the AA5 cell line to support virus replication. For this purpose, 25μl of serial diluted virus was added to 75μl AA5 cells at a concentration of 2 x 10^5/ml in a 96-well microtitre plate. Each virus dilution was tested in triplicate. Cells were cultured for eight days by addition of fresh medium every other day. On day 8 post infection, supernatant samples were tested for virus replication as evidenced by reverse transcriptase activity released to the supernatant. The $TCID_{50}$ was calculated according to the Reed and Muench formula (Reed, L.J. et al., 1938, Am. J. Hyg. 27:493-497). The titer of the HIV-1_{LAI} and HIV-1_{MN} stocks used for these studies, as measured on the AA5 cell line, was approximately 1.4 x 10^6 and 3.8 x 10^4 $TCID_{50}$/ml, respectively.

6.1.3. CELL FUSION ASSAY

Approximately 7 x 10^4 Molt cells were incubated with 1 x 10^4 CEM cells chronically infected with the HIV-1_{LAI} virus in 96-well plates (one-half area cluster plates; Costar, Cambridge, MA) in a final volume of 100μl culture medium as previously described (Matthews, T.J. et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5428). Peptide inhibitors were added in a volume of 10μl and the cell mixtures were incubated for 24 hr. at 37°C. At that time, multinucleated giant cells were estimated by microscopic examination

at a 40x magnification which allowed visualization of the entire well in a single field.

6.1.4. CELL FREE VIRUS INFECTION ASSAY

Synthetic peptides were incubated at 37°C with either 247 $TCID_{50}$ (for experiment depicted in FIG. 2), or 62 $TCID_{50}$ (for experiment depicted in FIG.3) units of HIV-1_{LAI} virus or 25 $TCID_{50}$ units of HIV-2_{NIHZ} and CEM $CD4^+$ cells at peptide concentrations of 0, 0.04, 0.4, 4.0, and 40μg/ml for 7 days. The resulting reverse transcriptase (RT) activity in counts per minute was determined using the assay described, below, in Section 6.1.5. See, Reed, L.J. et al., 1938, Am. J. Hyg. 27: 493-497 for an explanation of $TCID_{50}$ calculations.

6.1.5. REVERSE TRANSCRIPTASE ASSAY

The micro-reverse transcriptase (RT) assay was adapted from Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). Supernatants from virus/cell cultures are adjusted to 1% Triton-X100. A 10μl sample of supernatant was added to 50μl of RT cocktail in a 96-well U-bottom microtitre plate and the samples incubated at 37°C for 90 min. The RT cocktail contained 75mM KCl, 2mM dithiothreitol, 5mM $MgCl_2$, 5μg/ml poly A (Pharmacia, cat. No. 27-4110-01), 0.25 units/ml oligo dT (Pharmacia, cat. No. 27-7858-01), 0.05% NP40, 50mM Tris-HCl, pH 7.8, 0.5μM non-radioactive dTTP, and 10μCi/ml ^{32}P-dTTP (Amersham, cat. No. PB.10167).

After the incubation period, 40μl of reaction mixture was applied to a Schleicher and Schuell (S+S) NA45 membrane (or DE81 paper) saturated in 2 x SSC buffer (0.3M NaCl and 0.003M sodium citrate) held in a S+S Minifold over one sheet of GB003 (S+S) filter

paper, with partial vacuum applied. Each well of the minifold was washed four times with 200μl 2xSSC, under full vacuum. The membrane was removed from the minifold and washed 2 more times in a pyrex dish with an excess of 2xSSC. Finally, the membrane was drained on absorbent paper, placed on Whatman #3 paper, covered with Saran wrap, and exposed to film overnight at -70°C.

6.2. RESULTS

6.2.1. PEPTIDE INHIBITION OF INFECTED CELL-INDUCED SYNCYTIA FORMATION

The initial screen for antiviral activity assayed peptides' ability to block syncytium formation induced by overnight co-cultivation of uninfected Molt4 cells with chronically HIV-1 infected CEM cells. The results of several such experiments are presented herein. In the first of these experiments, serial DP178 (SEQ ID:1) peptide concentrations between 10μg/ml and 12.5ng/ml were tested for blockade of the cell fusion process. For these experiments, CEM cells chronically infected with either HIV-1_{LAI}, HIV-1_{MN}, HIV-1_{RF}, or HIV-1_{SF2} virus were cocultivated overnight with uninfected Molt 4 cells. The results (FIG. 4) show that DP178 (SEQ ID:1) afforded complete protection against each of the HIV-1 isolates down to the lowest concentration of DP178 (SEQ ID:1) used. For HIV_{LAI} inhibition, the lowest concentration tested was 12.5ng/ml; for all other HIV-1 viruses, the lowest concentration of DP178 (SEQ ID:1) used in this study was 100ng/ml. A second peptide, DP-180 (SEQ ID:2), containing the same amino acid residues as DP178 (SEQ ID:1) but arranged in a random order exhibited no evidence of anti-fusogenic activity even at the high concentration of 40μg/ml (FIG. 4). These observations indicate that the inhibitory effect of DP178 (SEQ

ID:1) is primary sequence-specific and not related to non-specific peptide/protein interactions. The actual endpoint (i.e., the lowest effective inhibitory concentration) of DP178 inhibitory action is within the range of 1-10 ng/ml.

The next series of experiments involved the preparation and testing of a DP178 (SEQ ID:1) homolog for its ability to inhibit HIV-1-induced syncytia formation. As shown in FIG. 1, the sequence of DP-185 (SEQ ID:3) is slightly different from DP178 (SEQ ID:1) in that its primary sequence is taken from the HIV-1_{SF2} isolate and contains several amino acid differences relative to DP178 (SEQ ID:1) near the N terminus. As shown in FIG. 4, DP-185 (SEQ ID:3), exhibits inhibitory activity even at 312.5ng/ml, the lowest concentration tested.

The next series of experiments involved a comparison of DP178 (SEQ ID:1) HIV-1 and HIV-2 inhibitory activity. As shown in FIG. 5, DP178 (SEQ ID:1) blocked HIV-1-mediated syncytia formation at peptide concentrations below 1ng/ml. DP178 (SEQ ID:1) failed, however, to block HIV-2 mediated syncytia formation at concentrations as high as 10μg/ml. This striking 4 log selectivity of DP178 (SEQ ID:1) as an inhibitor of HIV-1-mediated cell fusion demonstrates an unexpected HIV-1 specificity in the action of DP178 (SEQ ID:1). DP178 (SEQ ID:1) inhibition of HIV-1-mediated cell fusion, but the peptide's inability to inhibit HIV-2 medicated cell fusion in the same cell type at the concentrations tested provides further evidence for the high degree of selectivity associated with the antiviral action of DP178 (SEQ ID:1).

6.2.2. PEPTIDE INHIBITION OF INFECTION BY CELL-FREE VIRUS

DP178 (SEQ ID:1) was next tested for its ability to block CD-4$^+$ CEM cell infection by cell free HIV-1 virus. The results, shown in FIG. 2, are from an experiment in which DP178 (SEQ ID:1) was assayed for its ability to block infection of CEM cells by an HIV-1_{LAI} isolate. Included in the experiment were three control peptides, DP-116 (SEQ ID:9), DP-125 (SEQ ID:8), and DP-118 (SEQ ID:10). DP-116 (SEQ ID:9) represents a peptide previously shown to be inactive using this assay, and DP-125 (SEQ ID:8; Wild, C. et al., 1992, Proc. Natl. Acad, Sci. USA 89:10,537) and DP-118 (SEQ ID:10) are peptides which have previously been shown to be active in this assay. Each concentration (0, 0.04, 0.4, 4, and 40μg/ml) of peptide was incubated with 247 $TCID_{50}$ units of HIV-1_{LAI} virus and CEM cells. After 7 days of culture, cell-free supernatant was tested for the presence of RT activity as a measure of successful infection. The results, shown in FIG. 2, demonstrate that DP178 (SEQ ID:1) inhibited the de novo infection process mediated by the HIV-1 viral isolate at concentrations as low as 90ng/ml (IC50=90ng/ml). In contrast, the two positive control peptides, DP-125 (SEQ: ID:8) and DP-118 (SEQ ID:10), had over 60-fold higher IC50 concentrations of approximately 5μg/ml.

In a separate experiment, the HIV-1 and HIV-2 inhibitory action of DP178 (SEQ ID:1) was tested with CEM cells and either HIV-1_{LAI} or HIV-2_{NIHZ}. 62 $TCID_{50}$ HIV-1_{LAI} or 25 $GCID_{50}$ HIV-2_{NIHZ} were used in these experiments, and were incubated for 7 days. As may be seen in FIG. 3, DP178 (SEQ ID:1) inhibited HIV-1 infection with an IC50 of about 31ng/ml. In contrast, DP178 (SEQ ID:1) exhibited a much higher IC50 for HIV-2_{NIHZ}, thus making DP178 (SEQ ID:1) two logs more potent

as a HIV-1 inhibitor than a HIV-2 inhibitor. This finding is consistent with the results of the fusion inhibition assays described, above, in Section 6.2.1, and further supports a significant level of selectivity (i.e., for HIV-1 over HIV-2).

7. EXAMPLE: THE HIV-1 INHIBITOR, DP178 (SEQ ID:1) IS NON-CYTOTOXIC

In this Example, the 36 amino acid synthetic peptide inhibitor DP178 (SEQ ID:1) is shown to be non-cytotoxic to cells in culture, even at the highest peptide concentrations (40μg/ml) tested.

7.1. MATERIALS AND METHODS

Cell proliferation and toxicity assay: Approximately 3.8×10^5 CEM cells for each peptide concentration were incubated for 3 days at 37°C in T25 flasks. Peptides tested were DP178 (SEQ ID:1) and DP-116 (SEQ ID:9), as described in FIG. 1. Peptides were synthesized as described, above, in Section 6.1. The concentrations of each peptide used were 0, 2.5, 10, and 40μg/ml. Cell counts were taken at incubation times of 0, 24, 48, and 72 hours.

7.2. RESULTS

Whether the potent HIV-1 inhibitor DP178 (SEQ ID:1) exhibited any cytotoxic effects was assessed by assaying the peptide's effects on the proliferation and viability of cells in culture. CEM cells were incubated in the presence of varying concentrations of DP178 (SEQ ID:1), and DP-116 (SEQ ID:9), a peptide previously shown to be ineffective as a HIV inhibitor (Wild, C. et al., 1992, Proc. Natl. Acad. Sci. USA 89:10,537-10,541). Additionally, cells were incubated in the absence of either peptide.

The results of the cytotoxicity study demonstrate that DP178 (SEQ ID:1) exhibits no cytotoxic effects on cells in culture. As can be seen, below, in Table XXIV, even the proliferation and viability characteristics of cells cultured for 3 days in the presence of the highest concentration of DP178 (SEQ ID:1) tested (40μg/ml) do not significantly differ from the DP-116 (SEQ ID:9) or the no-peptide controls. The cell proliferation data is also represented in graphic form in FIG. 6. As was demonstrated in the Working Example presented above in Section 6, DP178 (SEQ ID:1) completely inhibits HIV-1 mediated syncytia formation at peptide concentrations between 1 and 10ng/ml, and completely inhibits cell-free viral infection at concentrations of at least 90ng/ml. Thus, this study demonstrates that even at peptide concentrations greater than 3 log higher than the HIV inhibitory dose, DP178 (SEQ ID:1) exhibits no cytotoxic effects.

TABLE XXIV

Peptide	Peptide Concentration µg/ml	% Viability at time (hours) 0	24	48	72
DP178 (SEQ ID:1)	40	98	97	95	97
	10	98	97	98	98
	2.5	98	93	96	96
DP116 (SEQ ID:9)	40	98	95	98	97
	10	98	95	93	98
	2.5	98	96	98	99
No Peptide	0	98	97	99	98

8. EXAMPLE: THE INTERACTION OF DP178 AND DP107

Soluble recombinant forms of gp41 used in the example described below provide evidence that the DP178 peptide associates with a distal site on gp41 whose interactive structure is influenced by the DP107 leucine zipper motif. A single mutation disrupting the coiled-coil structure of the leucine zipper domain transformed the soluble recombinant gp41 protein from an inactive to an active inhibitor of HIV-1 fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107, determinant. The results also indicate that the anti-HIV activity of various gp41 derivatives (peptides and recombinant proteins) may be

due to their ability to form complexes with viral gp41 and interfere with its fusogenic process.

8.1. MATERIALS AND METHODS

8.1.1. CONSTRUCTION OF FUSION PROTEINS AND GP41 MUTANTS

Construction of fusion proteins and mutants shown in FIG. 7 was accomplished as follows: the DNA sequence corresponding to the extracellular domain of gp41 (540-686) was cloned into the Xmn I site of the expression vector pMal-p2 (New England Biolab) to give M41. The gp41 sequence was amplified from pgtat (Malim et al., 1988, Nature 355: 181-183) by using polymerase chain reaction (PCR) with upstream primer 5'-ATGACGCTGACGGTACAGGCC-3' (primer A) and downstream primer 5'-TGACTAAGCTTAATACCACAGCCAATTTGTTAT-3' (primer B). M41-P was constructed by using the T7-Gen in vitro mutagenesis kit from United States Biochemicals (USB) following the supplier's instructions. The mutagenic primer (5'-GGAGCTGCTTGGGGCCCCAGAC-3') introduces an Ile to Pro mutation in M41 at position 578. M41Δ107, from which the DP-107 region has been deleted, was made using a deletion mutagenic primer 5'-CCAAATCCCCAGGAGCTGCTCGAGCTGCACTATACCAGAC-3' (primer C) following the USB T7-Gen mutagenesis protocol. M41Δ178, from which the DP-178 region has been deleted, was made by cloning the DNA fragment corresponding to gp41 amino acids 540-642 into the Xmn I site of pMal-p2. Primer A and 5'-ATAGCTTCTAGATTAATTGTTAATTTCTCTGTCCC-3' (primer D) were used in the PCR with the template pgtat to generate the inserted DNA fragments. M41-P was used as the template with primer A and D in PCR to generate M41-PΔ178. All inserted sequences and mutated residues

were checked by restriction enzyme analysis and confirmed by DNA sequencing.

8.1.2. PURIFICATION AND CHARACTERIZATION OF FUSION PROTEINS

The fusion proteins were purified according to the protocol described in the manufacturer's brochure of protein fusion and purification systems from New England Biolabs (NEB). Fusion proteins (10 ng) were analyzed by electrophoresis on 8% SDS polyacrylamide gels. Western blotting analysis was performed as described by Sambrook et al., 1989, Molecular Cloning: A Laboratory Manual, 2d Ed, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, Ch. 18, pp. 64-75. An HIV-1 positive serum diluted 1000-fold, or a human Fab derived from repertoire cloning was used to react with the fusion proteins. The second antibody was HRP-conjugated goat antihuman Fab. An ECL Western blotting detection system (Amersham) was used to detect the bound antibody. A detailed protocol for this detection system was provided by the manufacturer. Rainbow molecular weight markers (Amersham) were used to estimate the size of fusion proteins.

8.1.3. CELL FUSION ASSAYS FOR ANTI-HIV ACTIVITY

Cell fusion assays were performed as previously described (Matthews et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5481). CEM cells (7 X 10^4) were incubated with HIV-1_{mn} chronically infected CEM cells (10^4) in 96-well flat-bottomed half-area plates (Costar) in 100 μl culture medium. Peptide and fusion proteins at various concentrations in 10 μl culture medium were incubated with the cell mixtures at 37°C for 24 hours. Multinucleated syncytia were estimated with microscopic examination. Both M41 and M41-P did

not show cytotoxicity at the concentrations tested and shown in FIG. 8.

Inhibition of HIV-1 induced cell-cell fusion activity was carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41-PΔ178 as indicated in FIG. 9. There was no observable syncytia in the presence of 10 nM DP178. No peptide or fusion protein was added in the control samples.

8.1.4. ELISA ANALYSIS OF DP178 BINDING TO THE LEUCINE ZIPPER MOTIF OF GP41

The amino acid sequence of DP178 used is: YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF. For enzyme linked immunoassay (ELISA), M41Δ178 or M41-PΔ178 (5 μg/ml) in 0.1M $NaHCO_3$, pH 8.6, were coated on 96 wells Linbro ELISA plates (Flow Lab, Inc.) overnight. Each well was washed three times with distilled water then blocked with 3% bovine serum albumin (BSA) for 2 hours. After blocking, peptides with 0.5% BSA in TBST (40 mM Tris-HCl pH7.5, 150 mM NaCl, 0.05% Tween 20) were added to the ELISA plates and incubated at room temperature for 1 hour. After washing three times with TBST, Fab-d was added at a concentration of 10 ng/ml with 0.5% BSA in TBST. The plates were washed three times with TBST after incubation at room temperature for 1 hour. Horse radish peroxidase (HRP) conjugated goat antihuman Fab antiserum at a 2000 fold dilution in TBST with 0.5% BSA was added to each well and incubated at room temperature for 45 minutes. The plates were then washed four times with TBST. The peroxidase substrate o-phenylene diamine (2.5 mg/ml) and 0.15% H_2O_2 were added to develop the color. The reaction was stopped with an equal volume of 4.5 N H_2SO_4 after incubation at room temperature for 10 minutes. The optical density of the stopped reaction mixture was measured with a micro plate reader

(Molecular Design) at 490 nm. Results are shown in FIG. 10.

8.2. RESULTS

8.2.1. THE EXPRESSION AND CHARACTERIZATION OF THE ECTODOMAIN OF gp41

As a step toward understanding the roles of the two helical regions in gp41 structure and function, the ectodomain of gp41 was expressed as a maltose binding fusion protein (M41) (FIG. 7). The fusogenic peptide sequence at the N-terminal of gp41 was omitted from this recombinant protein and its derivatives to improve solubility. The maltose binding protein facilitated purification of the fusion proteins under relatively mild, non-denaturing conditions. Because the M41 soluble recombinant gp41 was not glycosylated, lacked several regions of the transmembrane protein (i.e., the fusion peptide, the membrane spanning, and the cytoplasmic domains), and was expressed in the absence of gp120, it was not expected to precisely reflect the structure of native gp41 on HIV-1 virions. Nevertheless, purified M41 folded in a manner that preserved certain discontinuous epitopes as evidenced by reactivity with human monoclonal antibodies, 98-6, 126-6, and 50-69, previously shown to bind conformational epitopes on native gp41 expressed in eukaryotic cells (Xu et al., 1991, J. Virol. 65: 4832-4838; Chen, 1994, J. Virol. 68:2002-2010). Thus, at least certain regions of native gp41 defined by these antibodies appear to be reproduced in the recombinant fusion protein M41. Furthermore, M41 reacted with a human recombinant Fab (Fab-d) that recognizes a conformational epitope on gp41 and binds HIV-1 virions as well as HIV-1 infected cells but not uninfected cells as analyzed by FACS. Deletion of either helix motif, i.e., DP107 or DP178, of the M41 fusion protein

eliminated reactivity with Fab-d. These results indicate that both helical regions, separated by 60 amino acids in the primary sequence, are required to maintain the Fab-d epitope.

8.2.2. ANTI-HIV ACTIVITY OF THE RECOMBINANT ECTODOMAIN OF GP41

The wild type M41 fusion protein was tested for anti-HIV-1 activity. As explained, supra, synthetic peptides corresponding to the leucine zipper (DP107) and the C-terminal putative helix (DP178) show potent anti-HIV activity. Despite inclusion of both these regions, the recombinant M41 protein did not affect HIV-1 induced membrane fusion at concentrations as high as 50 μM (Table XXV, below).

TABLE XXV

DISRUPTION OF THE LEUCINE ZIPPER OF GP41 FREES THE ANTI-HIV MOTIF

	DP107	DP178	M41	M41-P	M41-PA178
Cell fusion (IC_{90})	1 μM	1 nM	>50 μM	83 nM	>50 μM
Fab-D binding (k_D)	-	-	$3.5x10^{-9}$	$2.5x10^{-8}$	-
HIV infectivity (IC_{90})	1 μM	80 nM	>16 μM	66 nM	>8 μM

1 The affinity constants of Fab-d binding to the fusion proteins were determined using a protocol described by B. Friguet et al., 1985, J. Immunol. Method. 77:305-319.

- = No detectable binding of Fab-d to the fusion proteins.

Antiviral Infectivity Assays. 20 μl of serially diluted virus stock was incubated for 60 minutes at ambient temperature with 20 μl of the indicated

concentration of purified recombinant fusion protein in RPMI 1640 containing 10% fetal bovine serum and antibiotics in a 96-well microtiter plate. 20 μl of CEM4 cells at 6 x 10^5 cells/ml were added to each well, and cultures were incubated at 37°C in a humidified CO_2 incubator. Cells were cultured for 9 days by the addition of fresh medium every 2 to 3 days. On days 5, 7, and 9 postinfection, supernatant samples were assayed for reverse transcriptase (RT) activity, as described below; to monitor viral replication. The 50% tissue culture infectious dose ($TCID_{50}$) was calculated for each condition according to the formula of Reed & Muench, 1937, Am. J. Hyg. 27:493-497. RT activity was determined by a modification of the published methods of Goff et al., 1981, J. Virol. 38:239-248 and Willey et al., 1988, J. Virol. 62:139-147 as described in Chen et al., 1993, AIDS Res. Human Retroviruses 9:1079-1086.

Surprisingly, a single amino acid substitution, proline in place of isoleucine in the middle of the leucine zipper motif, yielded a fusion protein (M41-P) which did exhibit antiviral activity (Table XXV and Fig. 8). As seen in Table XXV, M41-P blocked syncytia formation by 90% at approximately 85 nM and neutralized HIV-1_{IIIB} infection by 90% at approximately 70 nM concentrations. The anti-HIV-1 activity of M41-P appeared to be mediated by the C-terminal helical sequence since deletion of that region from M41-P yielded an inactive fusion protein, M41-PΔ178 (Table XXV). This interpretation was reinforced by experiments demonstrating that a truncated fusion protein lacking the DP178 sequence, M41Δ178, abrogated the potent anti-fusion activity of the DP178 peptide in a concentration-dependent manner (FIG. 9). The same truncated fusion protein containing the proline mutation disrupting the leucine zipper, M41-PΔ178, was not active in similar competition experiments (FIG. 9). The results indicate that the DP178 peptide associates with a second site on gp41 whose interactive structure is dependent on a wild type leucine zipper sequence. A similar interaction may occur within the wild type fusion protein, M41, and act to form an intramolecular clasp which sequesters

the DP178 region, making it unavailable for anti-viral activity.

A specific association between these two domains is also indicated by other human monoclonal Fab-d studies. For example, Fab-d failed to bind either the DP178 peptide or the fusion protein M41Δ178, but its epitope was reconstituted by simply mixing these two reagents together (FIG. 10). Again, the proline mutation in the leucine zipper domain of the fusion protein, M41-PΔ178, failed to reconstitute the epitope in similar mixing experiments.

9. EXAMPLE: METHOD FOR COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES

A number of known coiled-coil sequences have been well described in the literature and contain heptad repeat positioning for each amino acid. Coiled-coil nomenclature labels each of seven amino acids of a heptad repeat A through G, with amino acids A and D tending to be hydrophobic positions. Amino acids E and G tend to be charged. These four positions (A, D, E, and G) form the amphipathic backbone structure of a monomeric alpha-helix. The backbones of two or more amphipathic helices interact with each other to form di-, tri-, tetrameric, etc., coiled-coil structures. In order to begin to design computer search motifs, a series of well characterized coiled coils were chosen including yeast transcription factor GCN4, Influenza Virus hemagglutinin loop 36, and human proto-oncogenes c-Myc, c-Fos, and c-Jun. For each peptide sequence, a strict homology for the A and D positions, and a list of the amino acids which could be excluded for the B, C, E, F, and G positions (because they are not observed in these positions) was determined. Motifs were tailored to the DP107 and DP178 sequences by

deducing the most likely possibilities for heptad positioning of the amino acids of HIV-1 Bru DP-107, which is known to have coiled-coil structure, and HIV-1 Bru DP178, which is still structurally undefined. The analysis of each of the sequences is contained in FIG. 12. For example, the motif for GCN4 was designed as follows:

1. The only amino acids (using standard single letter amino acid codes) found in the A or D positions of GCN4 were [LMNV].
2. All amino acids were found at B, C, E, F, and G positions except {CFGIMPTW}.
3. The PESEARCH motif would, therefore, be written as follows:

[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)

Translating or reading the motif: "at the first A position either L, M, N, or V must occur; at positions B and C (the next two positions) accept everything except C, F, G, I, M, P, T, or W; at the D position either L, M, N, or V must occur; at positions E, F, and G (the next 3 positions) accept everything except C, F, G, I, M, P, T, or W." This statement is contained four times in a 28-mer motif and five times in a 35-mer motif. The basic motif key then would be: [LMNV]-{CFGIMPTW}. The motif keys for the remaining well described coiled-coil sequences are summarized in FIG. 12.

The motif design for DP107 and DP178 was slightly different than the 28-mer model sequences described above due to the fact that heptad repeat positions are not defined and the peptides are both longer than 28 residues. FIG. 13 illustrates several possible

sequence alignments for both DP107 and DP178 and also includes motif designs based on 28-mer, 35-mer, and full-length peptides. Notice that only slight differences occur in the motifs as the peptides are lengthened. Generally, lengthening the base peptide results in a less stringent motif. This is very useful in broadening the possibilities for identifying DP107-or DP-178-like primary amino acid sequences referred to in this document as "hits".

In addition to making highly specific motifs for each type peptide sequence to be searched, it is also possible to make "hybrid" motifs. These motifs are made by "crossing" two or more very stringent motifs to make a new search algorithm which will find not only both "parent" motif sequences but also any peptide sequences which have similarities to one, the other, or both "parents". For example, in FIG. 14 the "parent" sequence of GCN4 is crossed with each of the possible "parent" motifs of DP-107. Now the hybrid motif must contain all of the amino acids found in the A and D positions of both parents, and exclude all of the amino acids not found in either parent at the other positions. The resulting hybrid from crossing GCN4 or [LMNV]{CFGIMPTW} and DP107 (28-mer with the first L in the D position) or [ILQT]{CDFIMPST}, is [ILMNQTV]{CFIMPT}. Notice that now only two basic hybrid motifs exist which cover both framing possibilities, as well as all peptide lengths of the parent DP-107 molecule. FIG. 15 represents the "hybridizations" of GCN4 with DP-178. FIG. 16 represents the "hybridizations" of DP107 and DP178. It is important to keep in mind that the represented motifs, both parent and hybrid, are motif keys and not the depiction of the full-length motif needed to actually do the computer search.

Hybridizations can be performed on any combination of two or more motifs. FIG. 17 summarizes several three-motif hybridizations including GCN4, DP107 (both frames), and DP178 (also both frames). Notice that the resulting motifs are now becoming much more similar to each other. In fact, the first and third hybrid motifs are actually subsets of the second and fourth hybrid motifs respectively. This means that the first and third hybrid motifs are slightly more stringent than the second and fourth. It should also be noted that with only minor changes in these four motifs, or by hybridizing them, a single motif could be obtained which would find all of the sequences. However, it should be remembered that stringency is also reduced. Finally, the most broad-spectrum and least-stringent hybrid motif is described in FIG. 18 which summarizes the hybridization of GCN4, DP107 (both frames), DP178 (both frames), c-Fos, c-Jun, c-Myc, and Flu loop 36.

A special set of motifs was designed based on the fact that DP-178 is located only approximately ten amino acids upstream of the transmembrane spanning region of gp41 and just C-terminal to a proline which separates DP107 and DP178. It has been postulated that DP178 may be an amphipathic helix when membrane associated, and that the proline might aid in the initiation of the helix formation. The same arrangement was observed in Respiratory Syncytial Virus; however, the DP178-like region in this virus also had a leucine zipper just C-terminal to the proline. Therefore, N-terminal proline-leucine zipper motifs were designed to analyze whether any other viruses might contain this same pattern. The motifs are summarized in FIG. 19.

The PC/Gene protein database contains 5879 viral amino acid sequences (library file PVIRUSES; CD-ROM

release 11.0). Of these, 1092 are viral enveloped or glycoprotein sequences (library file PVIRUSE1). Tables V through XIV contain lists of protein sequence names and motif hit locations for all the motifs searched.

10. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107 AND DP178-LIKE SEQUENCES IN HUMAN IMMUNODEFICIENCY VIRUS

FIG. 20 represents search results for HIV-1 BRU isolate gp41 (PC/Gene protein sequence PENV_HV1BR). Notice that the hybrid motif which crosses DP-107 and DP-178 (named 107x178x4; the same motif as found in FIG. 16 found three hits including amino acids 550-599, 636-688, and 796-823. These areas include DP-107 plus eight N-terminal and four C-terminal amino acids; DP178 plus seven N-terminal and ten C-terminal amino acids; and an area inside the transmembrane region (cytoplasmic). FIG. 20 also contains the results obtained from searching with the motif named ALLMOTI5, for which the key is found in FIG. 17 ({CDGHP}{CFP}x5). This motif also found three hits including DP107 (amino acids 510-599), DP178 (615-717), and a cytoplasmic region (772-841). These hits overlap the hits found by the motif 107x178x4 with considerable additional sequences on both the amino and carboxy termini. This is not surprising in that 107x178x4 is a subset of the ALLMOTI5 hybrid motif. Importantly, even though the stringency of ALLMOTI5 is considerably less than 107x178x4, it still selectively identifies the DP107 and DP178 regions of gp41 shown to contain sequences for inhibitory peptides of HIV-1. The results of these two motif searches are summarized in Table V under the PC/Gene protein sequence name PENV HV1BR. The proline-leucine zipper motifs also gave several hits in HIV-1 BRU including 503-525 which is

at the very C-terminus of gp120, just upstream of the cleavage site (P7LZIPC and P12LZIPC); and 735-768 in the cytoplasmic domain of gp41 (P23LZIPC). These results are found in Tables VIII, IX, and X under the same sequence name as mentioned above. Notice that the only area of HIV-1 BRU which is predicted by the Lupas algorithm to contain a coiled-coil region, is from amino acids 635-670. This begins eight amino acids N-terminal to the start and ends eight amino acids N-terminal to the end of DP178. DP107, despite the fact that it is a known coiled coil, is not predicted to contain a coiled-coil region using the Lupas method.

11. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN RESPIRATORY SYNCYTIAL VIRUS

FIG. 21 represents search results for Human Respiratory Syncytial Virus (RSV; Strain A2) fusion glycoprotein F1 (PC/Gene protein sequence name PVGLF_HRSVA). Motif 107x178x4 finds three hits including amino acids 152-202, 213-243, and 488-515. The arrangement of these hits is similar to what is found in HIV-1 except that the motif finds two regions with similarities to DP-178, one just downstream of what would be called the DP107 region or amino acids 213-243, and one just upstream of the transmembrane region (also similar to DP178) or amino acids 488-515. Motif ALLMOTI5 also finds three areas including amino acids 116-202, 267-302, and 506-549. The proline-leucine zipper motifs also gave several hits including amino acids 205-221 and 265-287 (P1LZIPC 265-280, P12LZIPC), and 484-513 (P7LZIPC and P12LZIPC 484-506, P23LZIPC). Notice that the PLZIP motifs also identify regions which share location similarities with DP-178 of HIV-1.

12. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN SIMIAN IMMUNODEFICIENCY VIRUS

Motif hits for Simian immunodeficiency Virus gp41 (AGM3 isolate; PC/Gene protein sequence name PENV_SIVAG) are shown in FIG. 22. Motif 107x178x4 finds three hits including amino acids 566-593, 597-624, and 703-730. The first two hits only have three amino acids between them and could probably be combined into one hit from 566-624 which would represent a DP107-like hit. Amino acids 703 to 730 would then represent a DP178-like hit. ALLMOTI5 also finds three hits including amino acids 556-628 (DP107-like), 651-699 (DP178-like), and 808-852 which represents the transmembrane spanning region. SIV also has one region from 655-692 with a high propensity to form a coiled coil as predicted by the Lupas algorithm. Both 107x178x4 and ALLMOTI5 motifs find the same region. SIV does not have any PLZIP motif hits in gp41.

The identification of DP178/DP107 analogs for a second SIV isolate (MM251) is demonstrated in the Example presented, below, in Section 19.

13. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178 LIKE SEQUENCES IN CANINE DISTEMPER VIRUS

Canine Distemper Virus (strain Onderstepoort) fusion glycoprotein F1 (PC/Gene Protein sequence name PVGLF_CDVO) has regions similar to Human RSV which are predicted to be DP107-like and DP178-like (FIG. 23). Motif 107x178x4 highlights one area just C-terminal to the fusion peptide at amino acids 252-293. Amino acids 252-286 are also predicted to be coiled coil using the Lupas algorithm. Almost 100 amino acids C-terminal to the first region is a DP178-like area at residues 340-367. ALLMOTI5 highlights three areas of

interest including: amino acids 228-297, which completely overlaps both the Lupas prediction and the DP107-like 107x178x4 hit; residues 340-381, which overlaps the second 107x178x4 hit; and amino acids 568-602, which is DP178-like in that it is located just N-terminal to the transmembrane region. It also overlaps another region (residues 570-602) predicted by the Lupas method to have a high propensity to form a coiled coil. Several PLZIP motifs successfully identified areas of interest including P6 and P12LZIPC which highlight residues 336-357 and 336-361 respectively; P1 and P12LZIPC which find residues 398-414; and P12 and P23LZIPC which find residues 562-589 and 562-592 respectively.

14. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN NEWCASTLE DISEASE VIRUS

FIG. 24 shows the motif hits found in Newcastle Disease Virus (strain Australia-Victoria/32; PC Gene protein sequence name PVGLF_NDVA). Motif 107x178x4 finds two areas including a DP107-like hit at amino acids 151-178 and a DP178-like hit at residues 426-512. ALLMOTI5 finds three areas including residues 117-182, 231-272, and 426-512. The hits from 426-512 include a region which is predicted by the Lupas method to have a high coiled-coil propensity (460-503). The PLZIP motifs identify only one region of interest at amino acids 273-289 (P1 and 12LZIPC).

15. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN PARAINFLUENZA VIRUS

Both motifs 107x178x4 and ALLMOTI5 exhibit DP107-like hits in the same region, 115-182 and 117-182 respectively, of Human Parainfluenza Virus (strain NIH 47885; PC/Gene protein sequence name PVGLF_p13H4;

(FIG. 25). In addition, the two motifs have a DP178-like hit just slightly C-terminal at amino acids 207-241. Both motifs also have DP178-like hits nearer the transmembrane region including amino acids 457-497 and 462-512 respectively. Several PLZIP motif hits are also observed including 283-303 (P5LZIPC), 283-310 (P12LZIPC), 453-474 (P6LZIPC), and 453-481 (P23LZIPC). The Lupas algorithm predicts that amino acids 122-176 may have a propensity to form a coiled-coil.

16. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES OF INFLUENZA A VIRUS

FIG. 26 illustrates the Lupas prediction for a coiled coil in Influenza A Virus (strain A/Aichi/2/68) at residues 379-436, as well as the motif hits for 107x178x4 at amino acids 387-453, and for ALLMOTI5 at residues 380-456. Residues 383-471 (38-125 of HA2) were shown by Carr and Kim to be an extended coiled coil when under acidic pH (Carr and Kim, 1993, Cell 73: 823-832). The Lupas algorithm predicts a coiled-coil at residues 379-436. All three methods successfully predicted the region shown to actually have coiled-coil structure; however, ALLMOTI5 predicted the greatest portion of the 88 residue stretch.

17. EXAMPLE: POTENTIAL RESPIRATORY SYNCYTIAL VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, respiratory syncytial virus (RSV) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 11, above, were tested for anti-RSV activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated

that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

17.1 MATERIALS AND METHODS

Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptides were synthesized according to the methods described, above, in Section 6.1. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-RSV antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of HEp2 cells acutely infected with RSV (i.e., cells which are infected with a multiplicity of infection of greater than 2) to fuse and cause syncytial formation on a monolayer of uninfected an uninfected line of Hep-2 cells. The lower the observed level of fusion, the greater the antiviral activity of the peptide was determined to be.

Uninfected confluent monolayers of Hep-2 cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics (penicillin/streptomycin; Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

To prepare Hep2 cells for addition to uninfected cells, cultures of acutely infected Hep2 cells were

washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected Hep-2 cells.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Hep-2 cells, then adding peptides (at the dilutions described below) in 3% EMEM, and 100 acutely RSV-infected Hep2 cells per well. Wells were then incubated at 37°C for 48 hours.

After incubation, cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of either Crystal Violet stain or XTT. With respect to Crystal Violet, approximately 50μl 0.25% Crystal Violet stain in methanol were added to each well. The wells were rinsed immediately, to remove excess stain, and were allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

With respect to XTT (2,3-bis[2-Methoxy-4-nitro-5-sulfophenyl]-2H-tetrazolium-5-carboxyanilide inner salt), 50μl XTT (1mg/ml in RPMI buffered with 100mM HEPES, pH 7.2-7.4, plus 5% DMSO) were added to each well. The $OD_{450/690}$ was measured (after blanking against growth medium without cells or reagents, and against reagents) according to standard procedures.

Peptides: The peptides characterized in the study presented herein were:

1) peptides T-142 to T-155 and T-575, as shown in FIG. 27A-B, and peptides T-22 to T-27, T-68, T-334 and T-371 to T-375 and T-575, as shown in FIG. 27C;

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2) peptides T-120 to T-141 and T-576, as shown in FIG. 27D-E, and peptides T-12, T-13, T-15, T-19, T-28 to T-30, T-66, T-69, T-70 and T-576, as shown in FIG. 27F; and

3) peptides T-67 and T-104 to T-119 and T-384, as shown in FIG. 28A-B, and peptides T-71, T-613 to T-617, T-662 to T-676 and T-730, as shown in FIG. 28C.

The peptides of group 1 represent portions of the RSV F2 protein DP178/107-like region. The peptides of group 2 represent portions of the RSV F1 protein DP107-like region. The peptides of groups 3 represent portions of the RSV F1 protein DP178-like region.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used. The IC_{50} data for each peptide represents the average of several experiments conducted utilizing that peptide.

17.2 RESULTS

The data summarized in FIGS. 27A-F and 28A-C represent antiviral and structural information obtained from peptides derived from the RSV F2 DP178/DP107-like F2 region (FIG. 27A-C), the RSV F1 DP-107-like region (FIG. 27D-F) and the RSV DP178-like F2 region (FIG. 28A-C).

As shown in FIGS. 27A-F, a number of the RSV DP178/DP107-like peptides exhibited a detectable level of antiviral activity. Peptides from the RSV DP178/DP107-like F2 region (FIG. 27A-C), for example, T-142 to T-145 and T-334 purfied peptides, exhibited detectable levels of antiviral activity, as evidenced by their IC_{50} values. Further, a number of RSV F1 DP107-like peptides (FIG. 27D-F) exhibited a sizable level of antiviral activity as purified peptides, including, for example, peptides T-124 to T-127, T-

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131, T-135 and T-137 to T-139, as demonstrated by their low IC_{50} values. In addition, CD analysis FIG. 27A-B, 27D-E) reveals that many of the peptides exhibit some detectable level of helical structure.

The results summarized in FIG. 28A-C demonstrate that a number of DP178-like purified peptides exhibit a range of potent anti-viral activity. These peptides include, for example, T-67, T-104, T-105 and T-107 to T-119, as listed in FIG. 28A-B, and T-665 to T-669 and T-671 to T-673, as listed in FIG. 28C. In addition, some of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, successfully identified viral peptide domains that represent highly promising anti-RSV antiviral compounds.

18. EXAMPLE: POTENTIAL HUMAN PARAINFLUENZA VIRUS TYPE 3 DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, human parainfluenza virus type 3 (HPIV3) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 15, above, were tested for anti-HPIV3 activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

18.1 MATERIALS AND METHODS

Structural analyses: Structural analyses consisted of circular dichroism (CD) studies. The CD

spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-HPIV3 antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of Hep2 cells chronically infected with HPIV3 to fuse and cause syncytial formation on a monolayer of an uninfected line of CV-1W cells. The more potent the lower the observed level of fusion, the greater the antiviral activity of the peptide.

Uninfected confluent monolayers of CV-1W cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics/antimycotics (Gibco BRL Life Technologies Cat. No. 15040-017) added at 1%, and glutamine added at 1%.

To prepare Hep2 cells for addition to uninfected cells, cultures of chronically infected Hep2 cells were washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected CV-1W cells.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected CV-1W cells, then adding peptides (at the

dilutions described below) in 3% EMEM, and 500 chronically HPIV3-infected Hep2 cells per well. Wells were then incubated at 37°C for 24 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Alternatively, instead of Crystal Violet analysis, cells were assayed with XTT, as described, avove, in Section 17.1.

Peptides: The peptides characterized in the study presented herein were:

1) Peptides 157 to 188, as shown in FIG. 29A-C, and peptides T-38 to T-40, T-42 to T-46 and T-582, as shown in FIG. 29D-E. These peptides are derived from the DP107 region of the HPIV3 F1 fusion protein (represented by HPF3 107, as shown in FIG. 29A-C); and

2) Peptides 189 to 210, as shown in FIG. 30A-B, and T-269, T-626, T-383 and T-577 to T-579, as shown in FIG. 30C. These peptides are primarily derived from the DP178 region of the HPIV3 F1 fusion protein (represented by HPF3 178, as shown in FIG. 30A-B). Peptide T-626 contains two mutated amino acid resides (represented by a shaded background). Additionally, peptide T-577 represents F1 amino acids 65-100, T-578 represents F1 amino acids 207-242 and T-579 represents F1 amino acids 273-309.

Each peptide was tested at 2-fold serial dilutions ranging from 500µg/ml to approximately

500ng/ml. For each of the assays, a well containing no peptide was also used.

18.2 RESULTS

The data summarized in FIGS. 29A-C and 30A-C represent antiviral and structural information obtained from peptides derived from the HPIV3 fusion protein DP107-like region (FIG. 29A-C) and the HPIV3 fusion protein DP178-like region (FIG. 30A-C).

As shown in FIG. 29A-C, a number of the HPIV3 DP107-like peptides exhibited potent levels of antiviral activity. These peptides include, for example, peptides T-40, T-172 to T-175, T-178, T-184 and T-185.

The results summarized in FIG. 30A-C demonstrate that a number of the DP178-like peptides tested exhibit a range of anti-viral activity. These peptides include, for example, peptides 194 to 211, as evidenced by their low IC_{50} values. In fact, peptides 201 to 205 exhibit IC_{50} values in the nanogram/ml range. In addition, many of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, have successfully identified viral peptide domains that represent highly promising anti-HPIV3 antiviral compounds.

19. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN IMMUNODEFICIENCY VIRUS

FIG. 31 represents search results for SIV isolate MM251 (PC/Gene® protein sequence PENV_SIVM2). Both 107x178x4 and ALLMOTI5 search motifs identified two regions with similarities to DP107 and/or DP178.

The peptide regions found by 107x178x4 were located at amino acid residues 156-215 and 277-289. The peptide regions found by ALLMOTI5 were located at

amino acid residues 156-219 and 245-286. Both motifs, therefore, identify similar regions.

Interestingly, the first SIV peptide region (i.e., from amino acid residue 156 to approximately amino acid residue 219) correlates with a DP107 region, while the second region identified (i.e., from approximately amino acid residue 245 to approximately amino acid residue 289) correlates with the DP178 region of HIV. In fact, an alignment of SIV isolate MM251 and HIV isolate BRU, followed by a selection of the best peptide matches for HIV DP107 and DP178, reveals that the best matches are found within the peptide regions identified by the 107x178x4 and ALLMOTI5 search motifs.

It should be noted that a potential coiled-coil region at amino acid residues 242-282 is predicted by the Lupas program. This is similar to the observation in HIV in which the coiled-coil is predicted by the Lupas program to be in the DP178 rather than in the DP107 region. It is possible, therefore, that SIV may be similar to HIV in that it may contain a coiled-coil structure in the DP107 region, despite such a structure being missed by the Lupas algorithm. Likewise, it may be that the region corresponding to a DP178 analog in SIV may exhibit an undefined structure, despite the Lupas program's prediction of a coiled-coil structure.

20. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN EPSTEIN-BARR VIRUS

The results presented herein describe the identification of DP178/DP107 analogs within two different Epstein-Barr Virus proteins. Epstein-Barr is a human herpes virus which is the causative agent of, for example, infectious mononucleosis (IM), and is also associated with nasopharyngeal carcinomas (NPC), Burkitt's lymphoma and other diseases. The virus predominantly exists in the latent form and is activated by a variety of stimuli.

FIG. 32 depicts the search motif results for the Epstein-Barr Virus (Strain B95-8; PC/Gene® protein sequence PVGLB_EBV) glycoprotein gp110 precursor (gp115). The 107x178x4 motif identified two regions of interest, namely the regions covered by amino acid residues 95-122 and 631-658. One PZIP region was identified at amino acid residue 732-752 which is most likely a cytoplasmic region of the protein. The Lupas algorithm predicts a coiled-coil structure for amino acids 657-684. No ALLMOTI5 regions were identified.

FIG. 33 depicts the search motif results for the Zebra (or EB1) trans-activator protein (BZLF1) of the above-identified Epstein-Barr virus. This protein is a transcription factor which represents the primary mediator of viral reactivation. It is a member of the b-ZIP family of transcription factors and shares significant homology with the basic DNA-binding and dimerization domains of the cellular oncogenes c-fos and C/EBP. The Zebra protein functions as a homodimer.

Search results domonstrate that the Zebra protein exhibits a single region which is predicted to be either of DP107 or DP178 similarity, and is found between the known DNA binding and dimerization regions of the protein. Specifically, this region is located

at amino acid residues 193-220, as shown in FIG. 33. The Lupas program predicted no coiled-coil regions.

21. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN MEASLES VIRUS

FIG. 34 illustrates the motif search results for the fusion protein F1 of measles virus, strain Edmonston (PC Gene® protein sequence PVGLF_MEASE), successfully identifying DP178/DP107 analogs.

The 107x178x4 motif identifies a single region at amino acid residues 228-262. The ALLMOTI5 search motif identifies three regions, including amino acid residues 116-184, 228-269 and 452-500. Three regions containing proline residues followed by a leucine zipper-like sequence were found beginning at proline residues 214, 286 and 451.

The Lupas program identified two regions it predicted had potential for coiled-coil structure, which include amino acid residues 141-172 and 444-483.

22. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN HEPATITIS B VIRUS

FIG. 35 depicts the results of a PZIP motif search conducted on the Hepatitis B virus subtype AYW. Two regions of interest within the major surface antigen precursor S protein were identified. The first lies just C-terminal to the proposed fusion peptide of the major surface antigen (Hbs) which is found at amino acid residues 174-191. The second region is located at amino acid residues 233-267. The Lupas program predicts no coiled-coil repeat regions.

In order to test the potential anti-HBV antiviral activity of these D178/DP107 analog regions, peptides derived from area around the analog regions are synthesized, as shown in FIG. 52A-B. These peptides represent one amino acid peptide "walks" through the

putative DP178/DP107 analog regions. The peptides are synthesized according to standard Fmoc chemistry on Rinkamide MBHA resins to provide for carboxy terminal blockade (Chang, C.D. and Meinhofer, J., 1978, Int. J. Pept. Protein Res. 11:246-249; Fields, G.B. and Noble, R.L., 1990, Int. J. Pept. Protein Res. 35:161-214). Follwing complete synthesis, the peptide amino-terminus is blocked through automated acetylation and the peptide is cleaved with trifluoroacetic acid (TFA) and the appropriate scavengers (King, D.S. et al., 1990, Int. J. Pept. Res. 36:255-266). After cleavage, the peptide is precipitated with ether and dried under vacuum for 24 hours.

The anti-HBV activity of the peptides is tested by utilizing standard assays to determine the test peptide concentration required to cause an acceptable (e.g., 90%) decrease in the amount of viral progeny formed by cells exposed to an HBV viral inoculum. Candidate antivial peptides are further characterized in model systems such as wood chuck tissue culture and animal sytems, prior to testing on humans.

23. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN MASON-PFIZER MONKEY VIRUS

The results depicted herein illustrate the results of search motifs conducted on the Simian Mason-Pfizer monkey virus. The motifs reveal DP178/DP107 analogs within the enveloped (TM) protein GP20, as shown in FIG. 36.

The 107x178x4 motifs identifies a region at amino acid residues 422-470. The ALLMOTI5 finds a region at amino acid residues 408-474. The Lupas program predicted a coiled-coil structure a amino acids 424-459.

24. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN BACTERIAL PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to sequences present in proteins of a variety of bacterial species.

FIG. 37 depicts the search motif results for the Pseudomonas aeruginosa fimbrial protein (Pilin). Two regions were identified by motifs 107x178x4 and ALLMOTI5. The regions located at amino acid residues 30-67 and 80-144 were identified by the 107x178x4 motif. The regions at amino acid residues 30-68 and 80-125 were identified by the ALLMOTI5.

FIG. 38 depicts the search motif results for the Pseudomonas gonorrhoeae fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 66-97 was identified by the 107x178x4 motif. The region located at amino acid residues 66-125 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 39 depicts the search motif results for the Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 40 depicts the search motif results for the Staphylococcus aureus toxic shock syndrome Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The

region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 41 summarizes the motif search results conducted on the Staphylococcus aureus enterotoxin Type E protein. These results demonstrate the successful identification of DP178/DP107 analogs corresponding to peptide sequences within this protein, as described below.

The ALLMOTI5 motif identified a region at amino acid residues 22-27. The 107x178x4 motif identified two regions, with the first at amino acid residues 26-69 and the second at 88-115. A P12LZIPC motif search identified two regions, at amino acid residues 163-181 and 230-250.

The Lupas program predicted a region with a high propensity for coiling at amino acid residues 25-54. This sequence is completely contained within the first region identified by both ALLMOTI5 and 107x178x4 motifs.

FIG. 42 depicts the search motif results conducted on a second Staphylococcus aureus toxin, enterotoxin A. Two regions were identified by the ALLMOTI5 motif, at amino acid residues 22-70 and amino acid residues 164-205. The 107x178x4 motif found two regions, the first at amino acid residues 26-69 and the second at amino acid residues 165-192. A P23LZIPC motif search revealed a region at amino acid residues 216-250. No coiled-coil regions were predicted by the Lupas program.

FIG. 43 shows the motif search results conducted on the E. coli heat labile enterotoxin A protein, demonstrating that identification of DP178/DP107 analogs corresponding to peptides located within this protein. Two regions were identified by the ALLMOTI5 motif, with the first residing at amino acid residues

55-115, and the second residing at amino acid residues 216-254. The 107x178x4 motif identified a single region at amino acid residues 78-105. No coiled-coil regions were predicted by the Lupas program.

25. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS WITHIN VARIOUS HUMAN PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to peptide sequences present within several different human proteins.

FIG. 44 illustrates the search motif results conducted on the human c-fos oncoprotein. The ALLMOTI5 motif identified a single region at amino acid residues 155-193. The 107x178x4 motif identified one region at amino acid residues 162-193. The Lupas program predicted a region at amino acid residues 148-201 to have coiled-coil structure.

FIG. 45 illustrates the search motif results conducted on the human lupus KU autoantigen protein P70. The ALLMOTI5 motif identified a single region at amino acid residues 229-280. The 107x178x4 motif identified one region at amino acid residues 235-292. The Lupas program predicted a region at amino acid residues 232-267 to have coiled-coil structure.

FIG. 46 illustrates the search motif results conducted on the human zinc finger protein 10. The ALLMOTI5 motif identified a single region at amino acid residues 29-81. The 107x178x4 motif identified one region at amino acid residues 29-56. A P23LZIPC motif search found a single region at amino acid residues 420-457. The Lupas program predicted no coiled-coil regions.

26. EXAMPLE: POTENTIAL MEASLES VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, measles (MeV) virus DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 21, above, are tested for anti-MeV activity. Additionally, circular dichroism (CD) structural analyses are conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that none of the these peptides exhibit a substantial helical character.

26.1 MATERIALS AND METHODS

Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-MeV antiviral activity syncytial reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of Vero cells acutely infected with MeV (i.e., cells which are infected with a multiplicity of infection of 2-3) to fuse and cause syncytial formation on a monolayer of an uninfected line of Vero cells. The more potent the peptide, the lower the observed level of fusion, the greater the antiviral activity of the peptide.

Uninfected confluent monolayers of Vero cells were grown in microtiter wells in 10% FBS EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum

[FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 10%, antibiotics/antimycotics (Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

To prepare acutely infected Vero cells for addition to the uninfected cells, cultures of acutely infected Vero cells were washed twice with HBSS (Bio Whittaker Cat. No. 10-543F) and cell monolayers were removed with trypsin (Bio Whittaker Cat. No. 17-161E). Once cells detached, media was added, any remaining clumps of cells were dispersed, and hemacytometer cell counts were performed.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and 50-100 acutely MeV-infected Vero cells per well. Wells were then incubated at 37°C for a maximum of 18 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Anti-MeV antiviral activity plaque reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of MeV to infect permissive, uninfected Vero cells, leading to the infected cells' fusing with uninfected cells to produce syncytia. The lower the observed level of syncytial formation, the greater the antiviral activity of the peptide.

Monolayers of uninfected Vero cells are grown as described above.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and MeV stock virus at a final concentration of 30 plaque forming units (PFU) per well. Wells were then incubated at 37°C for a minimum of 36 hours and a maximum of 48 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Peptides: The peptides characterized in the study presented herein were peptides T-252A0 to T-256A0, T-257B1/C1, and T-258B1 to T-265B0, and T-266A0 to T-268A0, as shown in FIG. 47. These peptides represent a walk through the DP178-like region of the MeV fusion protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

26.2 RESULTS

The data summarized in FIG. 47 represents antiviral and structural information obtained via "peptide walks" through the DP178-like region of the MeV fusion protein.

As shown in FIG. 47, the MeV DP178-like peptides exhibited a range of antiviral activity as crude peptides. Several of these peptides were chosen for purification and further antiviral characterization.

The IC_{50} values for such peptides were determined, as shown in FIG. 47, and ranged from 1.35μg/ml (T-257B1/C1) to 0.072μg/ml (T-265B1). None of the DP178-like peptides showed, by CD analysis, a detectable level of helicity.

Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-MeV antiviral compounds.

27. EXAMPLE: POTENTIAL SIV DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, simian immunodeficiency virus (SIV) DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9, 12 and 19, above, were tested for anti-SIV activity. It is demonstrated that several of the identified peptides exhibit potent antiviral capability.

27.1 MATERIALS AND METHODS

Anti-SIV antiviral assays: The assay utilized herein were as reported in Langolis et al. (Langolis, A.J. et al., 1991, AIDS Research and Human Retroviruses 7:713-720).

Peptides: The peptides characterized in the study presented herein were peptides T-391 to T-400, as shown in FIG. 48. These peptides represent a walk through the DP178-like region of the SIV TM protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

27.2 RESULTS

The data summarized in FIG. 48 represents antiviral information obtained via "peptide walks" through the DP178-like region of the SIV TM protein.

As shown in FIG. 48, peptides T-391 to T-400 were tested and exhibited a potent antiviral activity as crude peptides.

Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-SIV antiviral compounds.

28. EXAMPLE: ANTI-VIRAL ACTIVITY OF DP107 AND DP-178 PEPTIDE TRUNCATIONS AND MUTATIONS

The Example presented in this Section represents a study of the antiviral activity of DP107 and DP178 truncations and mutations. It is demonstrated that several of these DP107 and DP178 modified peptides exhibit substantial antiviral activity.

28.1 MATERIALS AND METHODS

Anti-HIV assays: The antiviral assays performed were as those described, above, in Section 6.1. Assays utilized HIV-1/IIIb and/or HIV-2 NIHZ isolates. Purified peptides were used, unless otherwise noted in FIGS. 49A-C.

Peptides: The peptides characterized in the study presented herein were:

1) FIGS. 49A-C present peptides derived from the region around and containing the DP178 region of the HIV-1 BRU isolate. Specifically, this region spanned from gp41 amino acid residue 615 to amino acid residue 717. The peptides listed contain truncations of this region and/or mutations

which vary from the DP178 sequence amino acid sequence. Further, certain of the peptides have had amino- and/or carboxy-terminal groups either added or removed, as indicated in the figures; and

2) FIG. 50. presents peptides which represent truncations of DP107 and/or the gp41 region surrounding the DP107 amino acid sequence of HIV-1 BRU isolate. Certain of the peptides are unblocked or biotinylated, as indicated in the figure.

Blocked peptides contained an acyl N-terminus and an amido C-terminus.

28.2 RESULTS

Anti-HIV antiviral data was obtained with the group 1 DP178-derived peptides listed in FIG. 49A-C. The full-length, non-mutant DP178 peptide (referred to in FIG. 49A-C as T20) results shown are for 4ng/ml.

In FIG. 49A, a number of the DP178 truncations exhibited a high level of antiviral activity, as evidenced by their low IC_{50} values. These include, for example, test peptides T-50, T-624, T-636 to T-641, T-645 to T-650, T-652 to T-654 and T-656. T-50 represents a test peptide which contains a point mutation, as indicated by the residue's shaded background. The HIV-1-derived test peptides exhibited a distinct strain-specific antiviral activity, in that none of the peptides tested on the HIV-2 NIHZ isolate demonstrated appreciable antti-HIV-2 antiviral activity.

Among the peptides listed in FIG. 49B, are test peptides representing the amino (T-4) and carboxy (T-3) terminal halves of DP178 were tested. The amino terminal peptide was not active (IC_{50}>400μg/ml) whereas the carboxy terminal peptide showed potent antiviral

activity (IC_{50}= 3μg/ml). A number of additional test peptides also exhibited a high level of antiviral activity. These included, for example, T-61/T-102, T-217 to T-221, T-235, T-381, T-677, T-377, T-590, T-378, T-591, T-271 to T-272, T-611, T-222 to T-223 and T-60/T-224. Certain of the antiviral peptides contain point mutations and/or amino acid residue additions which vary from the DP178 amino acid sequence.

In FIG. 49C, point mutations and/or amino and/or carboxy-terminal modifications are introduced into the DP178 amino acid sequence itself. As shown in the figure, the majority of the test peptides listed exhibit potent antiviral activity.

Truncations of the DP107 peptide (referred to in IG. 50 as T21) were also produced and tested, as shown in FIG. 50. FIG. 50 also presents data concerning blocked and unblocked peptides which contain additional amino acid residues from the gp41 region in which the DP107 sequence resides. Most of these peptides showed antiviral activity, as evidenced by their low IC_{50} values.

Thus, the results presented in this Section demonstrate that not only do the full length DP107 and DP178 peptides exhibit potent antiviral activity, but truncations and/or mutant versions of these peptides can also possess substantial antiviral character.

29: EXAMPLE: POTENTIAL EPSTEIN-BARR DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, peptides derived from the Epstein-Barr (EBV) DP-178/DP107 analog region of the Zebra protein identified, above, in the Example presented in Section 20 are described and tested for anti-EBV activity. It is demonstrated that among these peptides are ones which exhibit potential anti-viral activity.

29.1 MATERIALS AND METHODS

Electrophoretic Mobility Shift Assays (EMSA):

Briefly, an EBV Zebra protein was synthesized utilizing SP6 RNA polymerase in vitro transcription and wheat germ in vitro translation systems (Promega Corporation recommendations; Butler, E.T. and Chamberlain, M.J., 1984, J. Biol. Chem. 257:5772; Pelham, H.R.B. and Jackson, R.J., 1976, Eur. J. Biochem. 67:247). The in vitro translated Zebra protein was then preincubated with increasing amounts of peptide up to 250 ng/ml prior to the addition of 10,000 to 20,000 c.p.m. of a ^{32}P-labeled Zebra response element DNA fragment. After a 20 minute incubation in the presence of the response element, the reaction was analyzed on a 4% non-denaturing polyacrylamide gel, followed by autoradiography, utilizing standard gel-shift procedures. The ability of a test peptide to prevent Zebra homodimer DNA binding was assayed by the peptide's ability to abolish the response element gel migration retardation characteristic of a protein-bound nucleic acid molecule.

Peptides: The peptides characterized in this study represent peptide walks through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. Specifically, the peptide walks covered the region from amino acid residue 173 to amino acid residue 246 of the EBV Zebra protein.

Each of the tested peptides were analyzed at a range of concentrations, with 150ng/ml being the lowest concentration at which any of the peptides exerted an inhibitory effect.

29.2 RESULTS

The EBV Zebra protein transcription factor contains a DP178/DP107 analog region, as demonstrated in the Example presented, above, in Section 20. This protein appears to be the primary factor responsible for the reactivation capability of the virus. A method by which the DNA-binding function of the Zebra virus may be abolished may, therefore, represent an effective antiviral technique. In order to identify potential anti-EBV DP178/DP107 peptides, therefore, peptides derived from the region identified in Section 20, above, were tested for their ability to inhibit Zebra protein DNA binding.

The test peptides' ability to inhibit Zebra protein DNA binding was assayed via the EMSA assays described, above, in Section 28.1. The data summarized in FIG. 51A-B presents the results of EMSA assays of the listed EBV test peptides. These peptides represent one amino acid "walks" through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. As shown in FIG. 51A-B, the region from which these peptides are derived lies from EBV Zebra protein amino acid residue 173 to 246. A number of the test peptides which were assayed exhibited an ability to inhibit Zebra protein homodimer DNA binding, including 439, 441, 444 and 445.

Those peptides which exhibit an ability to inhibit Zebra protein DNA binding represent potential anti-EBV antiviral compounds whose ability to inhibit EBV infection can be further characterized.

The present invention is not to be limited in scope by the specific embodiments described which are intended as single illustrations of individual aspects

of the invention, and functionally equivalent methods and components are within the scope of the invention. Indeed, various modifications of the invention, in addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description and accompanying drawings. Such modifications are intended to fall within the scope of the appended claims.

WHAT IS CLAIMED IS:

1. An isolated peptide recognized by an ALLMOTI5, 107x178x4 or a PLZIP sequence search motif.

2. The peptide of Claim 1 wherein the peptide corresponds to a peptide present in a virus.

3. The peptide of Claim 2 in which the virus is HIV-1 or HIV-2.

4. The peptide of Claim 2 in which the virus is a respiratory syncytial virus.

5. The peptide of Claim 2 in which the virus is a human parainfluenza virus.

6. The peptide of Claim 2 in which the virus is an influenza virus.

7. The peptide of Claim 2 in which the virus is a hepatitis B virus.

8. The peptide of Claim 2 wherein the virus is an Epstein-Barr virus.

9. A method for the inhibition of transmission of a virus to a cell, comprising contacting the cell with an effective concentration of a peptide recognized by an ALLMOTI5, 107x178x4 or a PLZIP sequence search motif for an effective period of time so that no infection of the cell by the virus occurs.

10. The method of Claim 9 wherein the virus is HIV-1 or HIV-2.

11. The method of Claim 9 wherein the virus is a respiratory syncytial virus.

12. The method of Claim 9 wherein the virus is a human parainfluenza virus.

13. The method of Claim 9 wherein the virus is an influenza virus.

14. The method of Claim 9 in which the virus is a hepatitis B virus.

15. The method of Claim 9 wherein the virus is an Epstein-Barr virus.

HIV1LAI (DP-178; SEQ ID:1)	YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF
HIV1SF2 (DP-185; SEQ ID:3)	YTNTIYNLLEESQNQQEKNEQELLELDKWASLWNWF
HIV1RF (SEQ ID:4)	YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF
HIV1MN (SEQ ID:5)	YTSLIYSLLEKSQTQQEKNEQELLELDKWASLWNWF
HIV2ROD (SEQ ID:6)	LEANISKSLEQAQIQQEKNMYELQKLNSWDIFGNWF
HIV2NIHZ (SEQ ID:7)	LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL
DP180 (SEQ ID:2)	SSESFTLLEQWNNWKLQLAEQWLEQINEKHYLEDIS
DP118 (SEQ ID:10)	QQLLDVVKRQQEMLRLTVWGTKNLQARVTAIEKYLKDQ
DP125 (SEQ ID:8)	CGGNNLLRAIEAQQHLLQLTVWGIKQLQARILAVERYLKDQ
DP116 (SEQ ID:9)	LQARILAVERYLKDQQQ

FIG.1

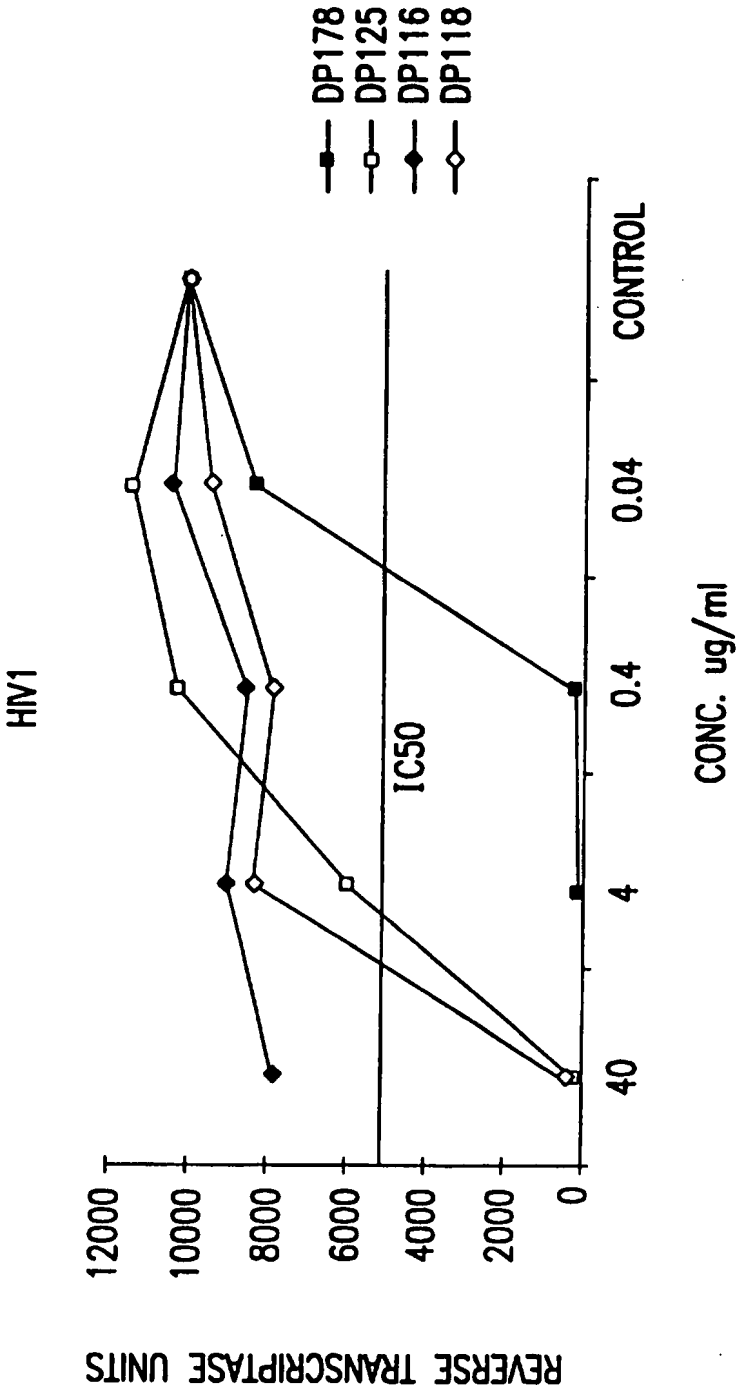

DP178
DP125
DP116
DP118
HIV1
IC50
CONTROL
0.04
0.4
4
40
CONC. ug/ml
12000
10000
8000
6000
4000
2000
0
REVERSE TRANSCRIPTASE UNITS

FIG.2

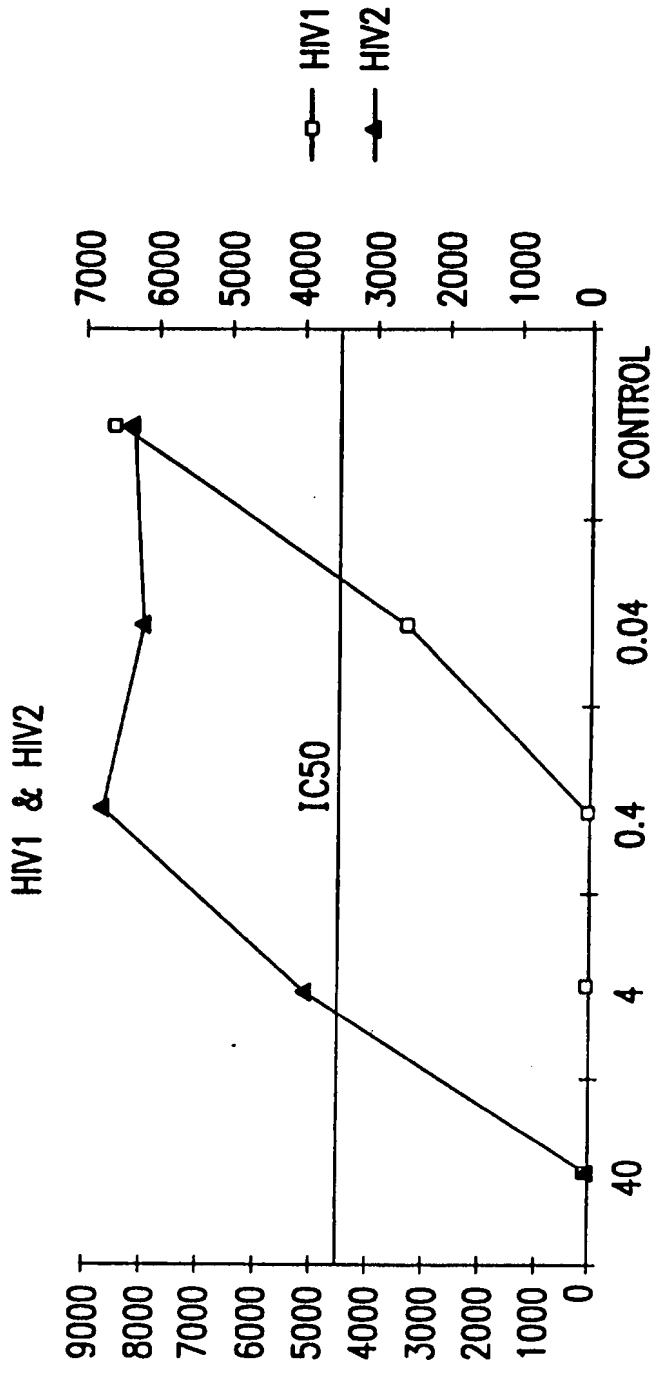

HIV1
HIV2
HIV1 & HIV2
IC50
CONTROL
PD178 CONC. ug/ml
0
0.04
0.4
4
40
1000
2000
3000
4000
5000
6000
7000
8000
9000

FIG.3

Number of Syncytia/well: concentration in μg/ml (micrograms/ml)

DP178	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	0	67
HIV1MN	0	0	0	0	0	ND	ND	ND	34
HIV1RF	0	0	0	0	0	ND	ND	ND	65
HIV1SF2	0	0	0	0	0	ND	ND	ND	58

DP125	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	54	69	80	75	79	82	67
HIV1MN	0	0	30	36	ND	ND	ND	ND	34
HIV1RF	0	0	67	63	ND	ND	ND	ND	65
HIV1SF2	0	0	9	66	ND	ND	ND	ND	58

DP116	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	75	ND	ND	ND	ND	ND	ND	ND	67
HIV1MN	35	ND	ND	ND	ND	ND	ND	ND	34
HIV1RF	81	ND	ND	ND	ND	ND	ND	ND	65
HIV1SF2	81	ND	ND	ND	ND	ND	ND	ND	58

FIG.4A

DP180	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	50	>45	>45	>45	>45	>45	>45	>45	58

DP185	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	ND	60

FIG.4B

HIV1

	Number of Syncytia/well: concentration in ng/ml (nanograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	0	0	0	0	0	14	20	48
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	ND	48	ND	ND	ND	ND	ND	ND

HIV2

	Number of Syncytia/well: concentration in µg/ml (micrograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	50	54	55	57	63	77	78	76
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	ND	58	ND	ND	ND	ND	ND	ND

FIG.5

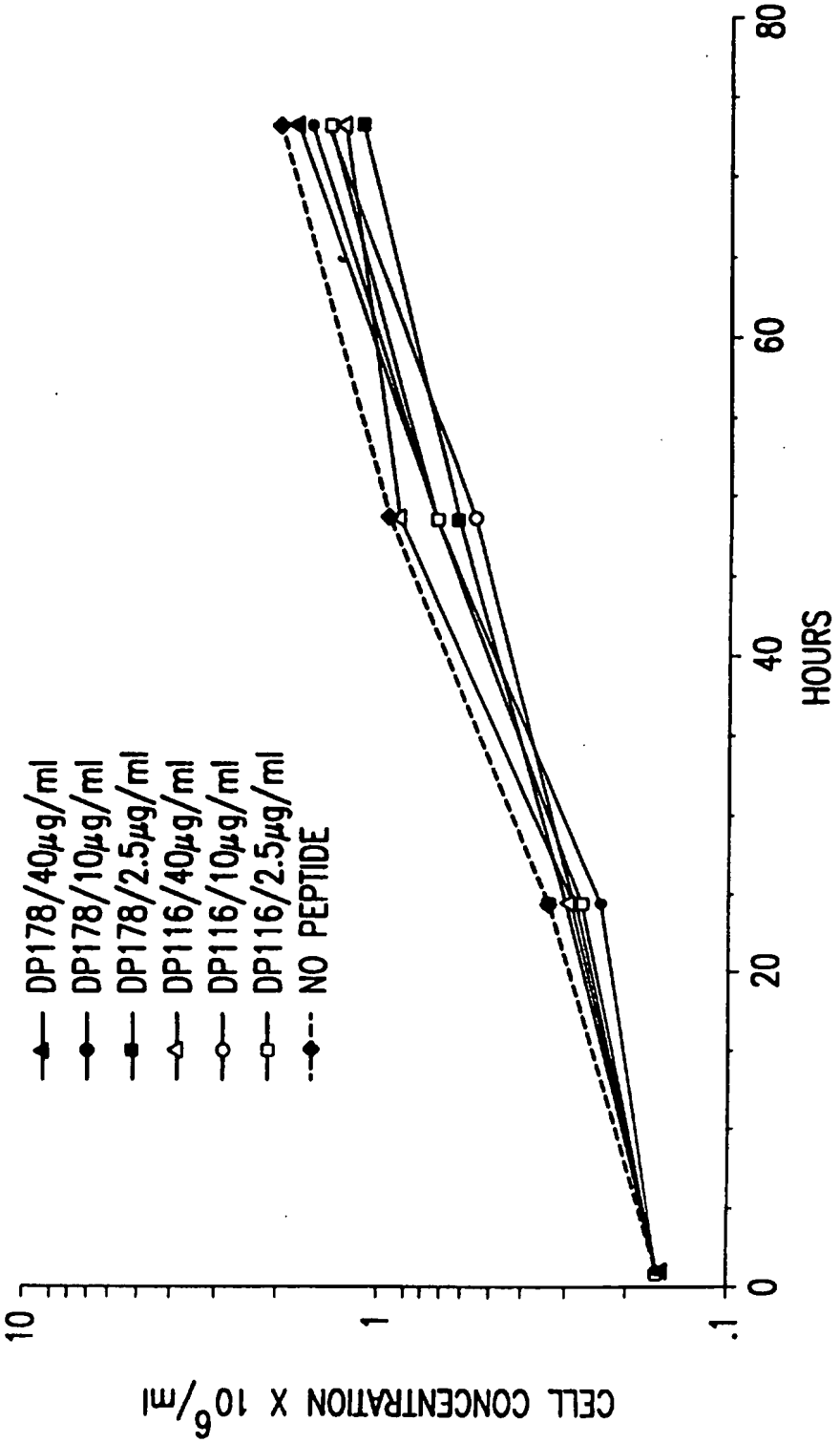

CELL CONCENTRATION X 10^6/ml
10
1
.1
0
20
40
60
80
HOURS
DP178/40μg/ml
DP178/10μg/ml
DP178/2.5μg/ml
DP116/40μg/ml
DP116/10μg/ml
DP116/2.5μg/ml
NO PEPTIDE

FIG.6

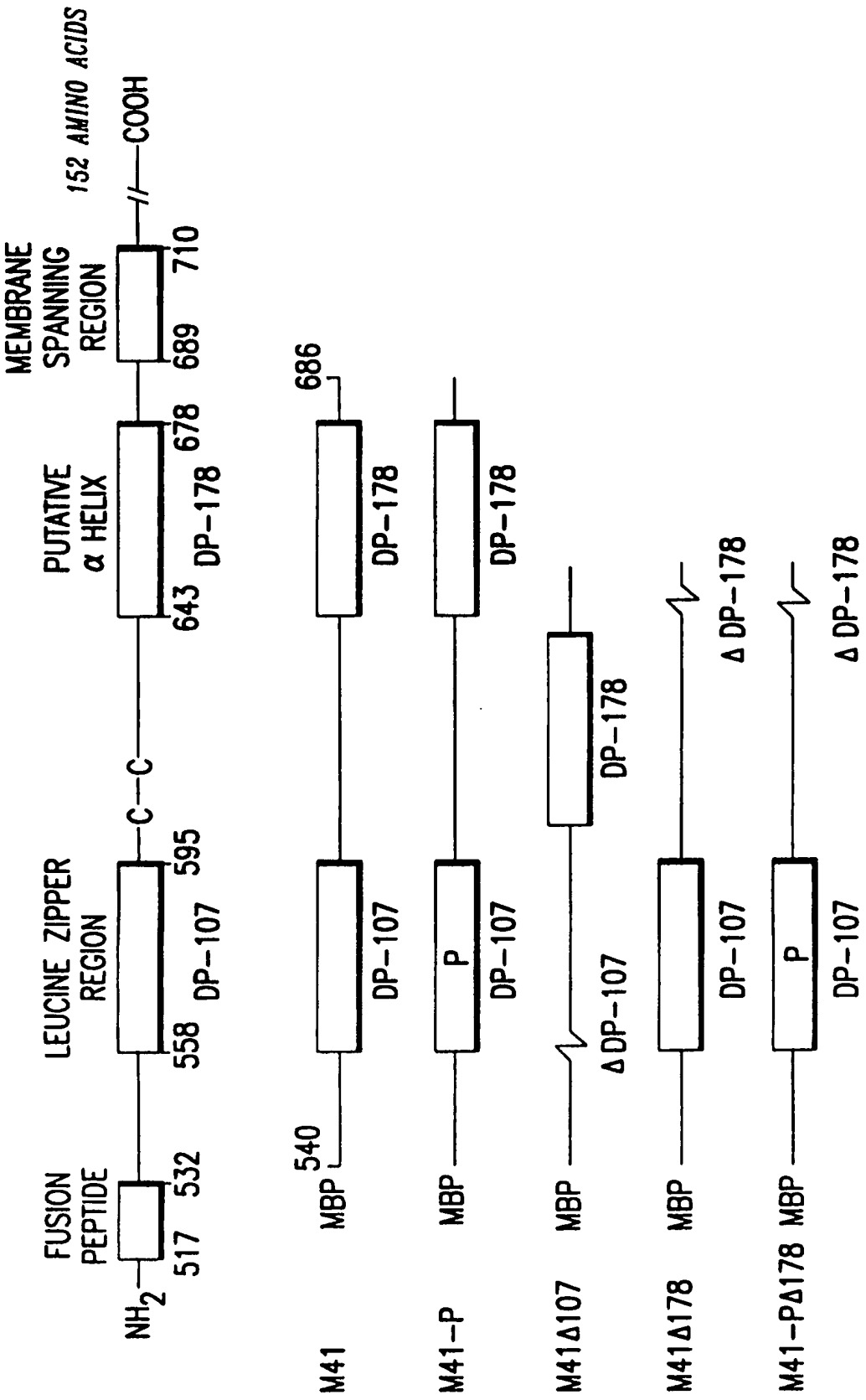

NH2
FUSION PEPTIDE
517
532
LEUCINE ZIPPER REGION
558
DP-107
595
C—C
PUTATIVE α HELIX
643
DP-178
678
MEMBRANE SPANNING REGION
689
710
152 AMINO ACIDS
COOH
M41
MBP
540
DP-107
DP-178
686
M41-P
MBP
P
DP-107
DP-178
M41Δ107
MBP
ΔDP-107
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MBP
DP-107
ΔDP-178
M41-PΔ178
MBP
P
DP-107
ΔDP-178

FIG.7

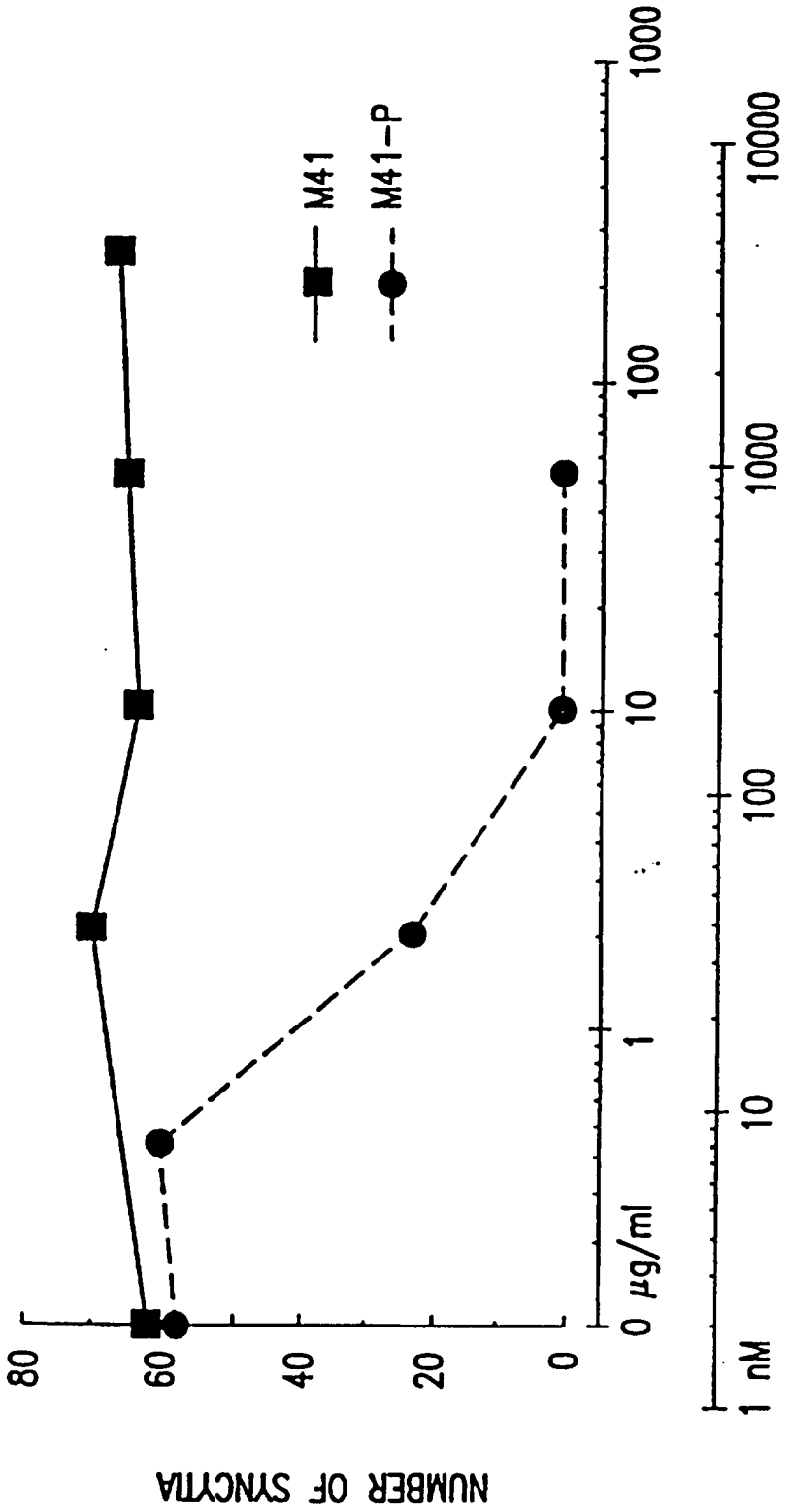

M41
M41-P
NUMBER OF SYNCYTIA
80
60
40
20
0
0 µg/ml
1
10
100
1000
1 nM
10
100
1000
10000

FIG.8

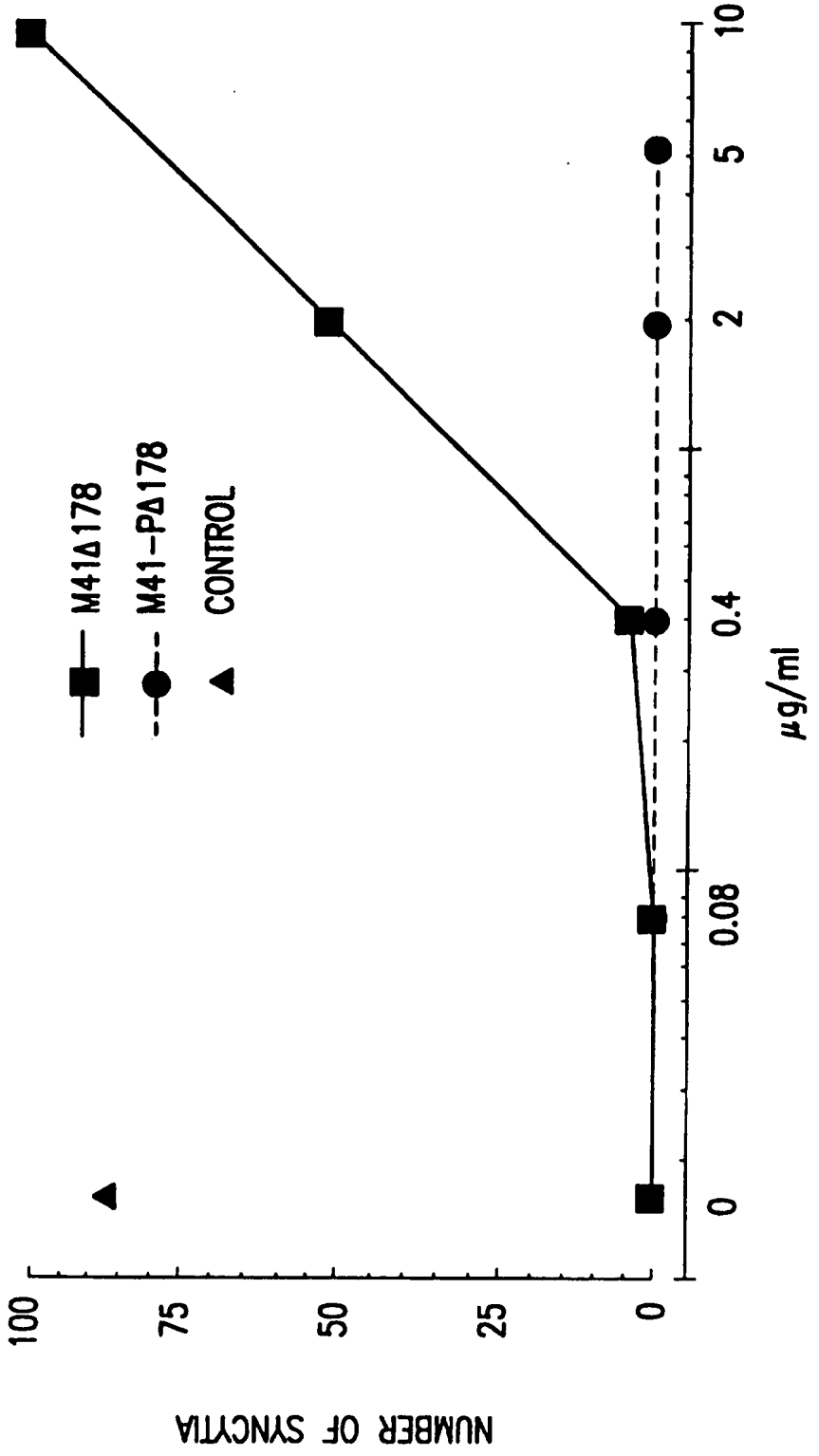

NUMBER OF SYNCYTIA
100
75
50
25
0
0
0.08
0.4
2
5
10
μg/ml
M41Δ178
M41-PΔ178
CONTROL

FIG.9

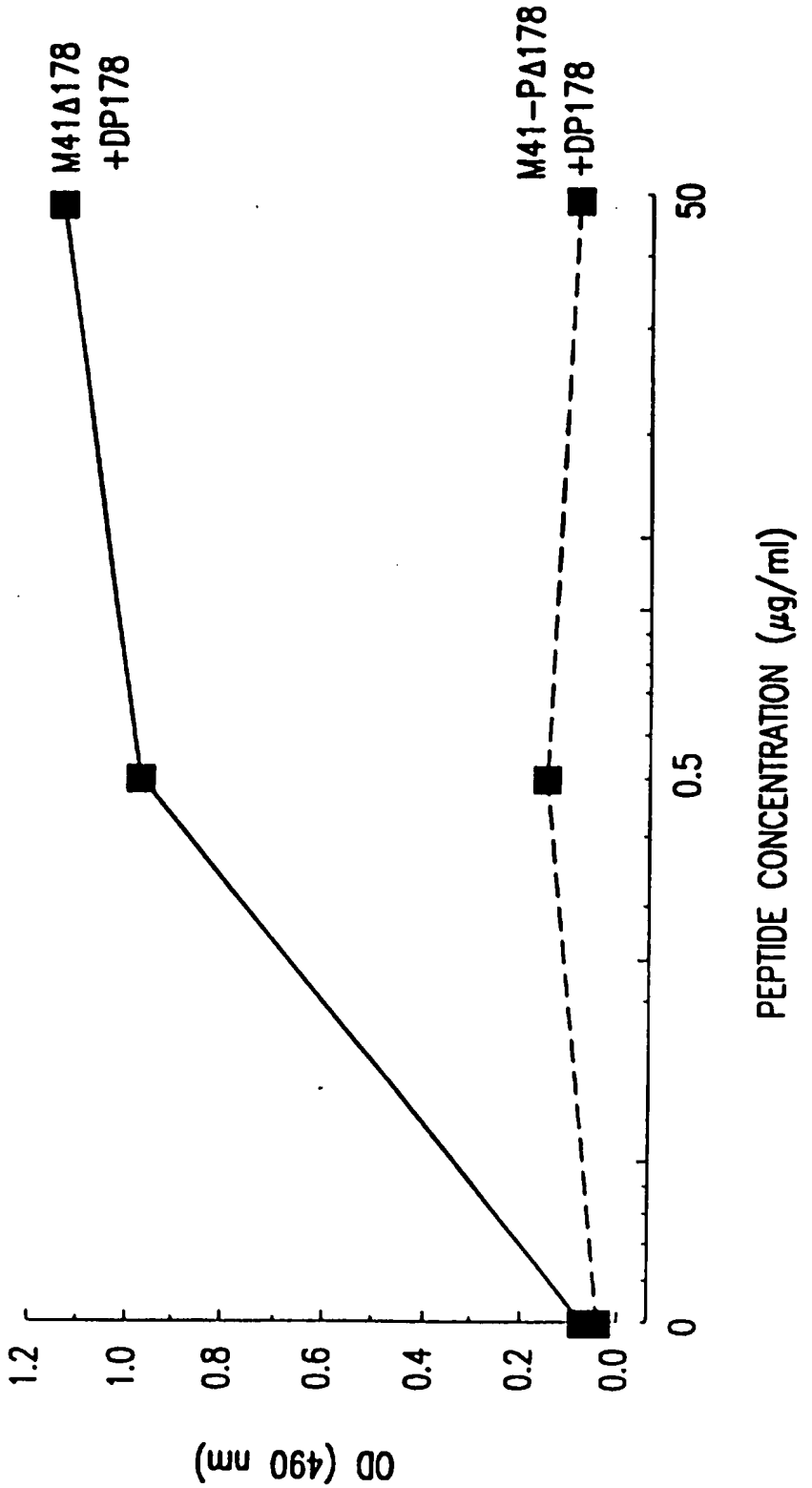

M41Δ178
+DP178
M41-PΔ178
+DP178
OD (490 nm)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
0.5
50
PEPTIDE CONCENTRATION (μg/ml)

FIG.10

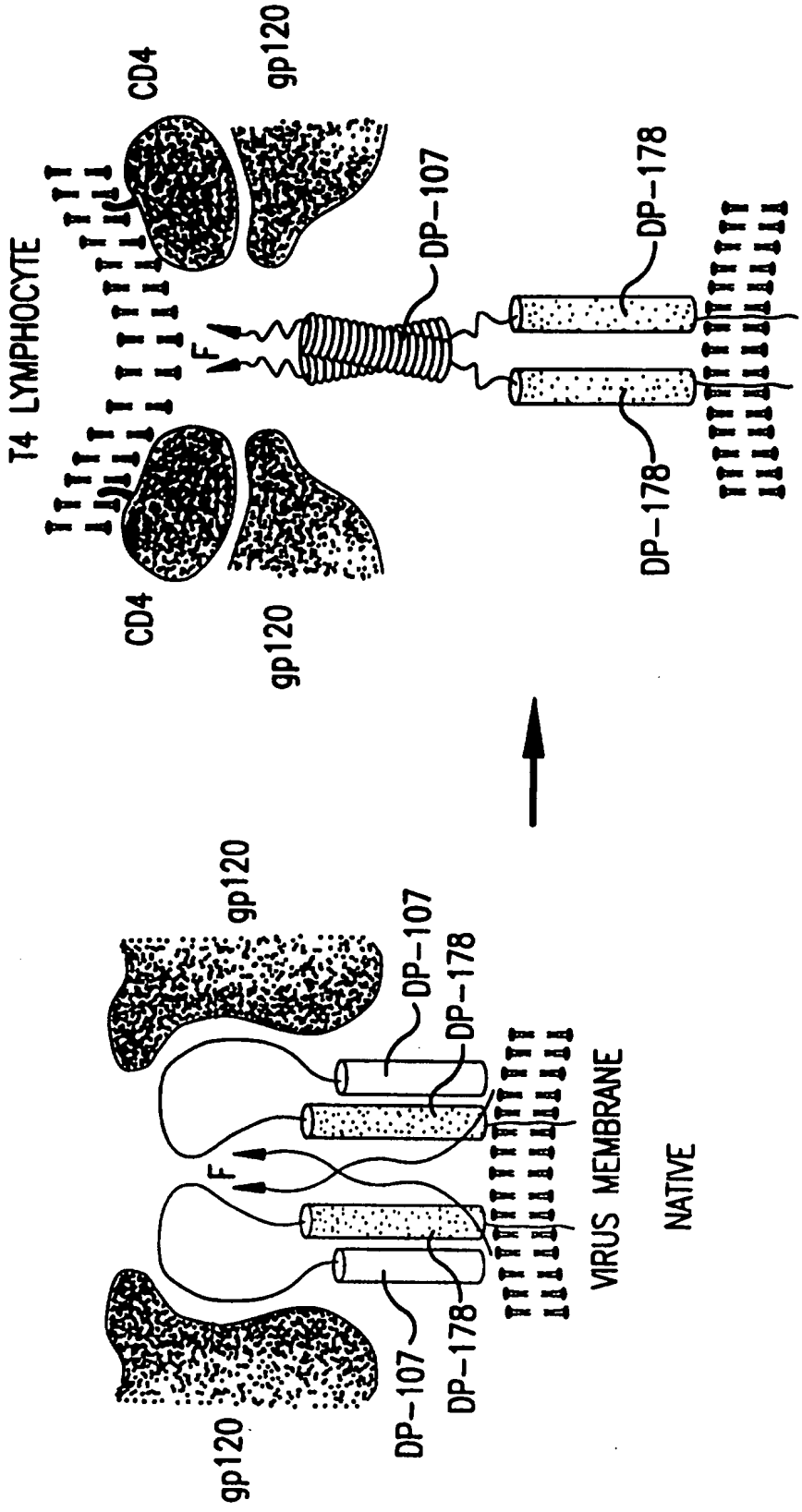

T4 LYMPHOCYTE
CD4
gp120
DP-107
DP-178
F
FUSOGENIC
NATIVE
VIRUS MEMBRANE

FIG.11A

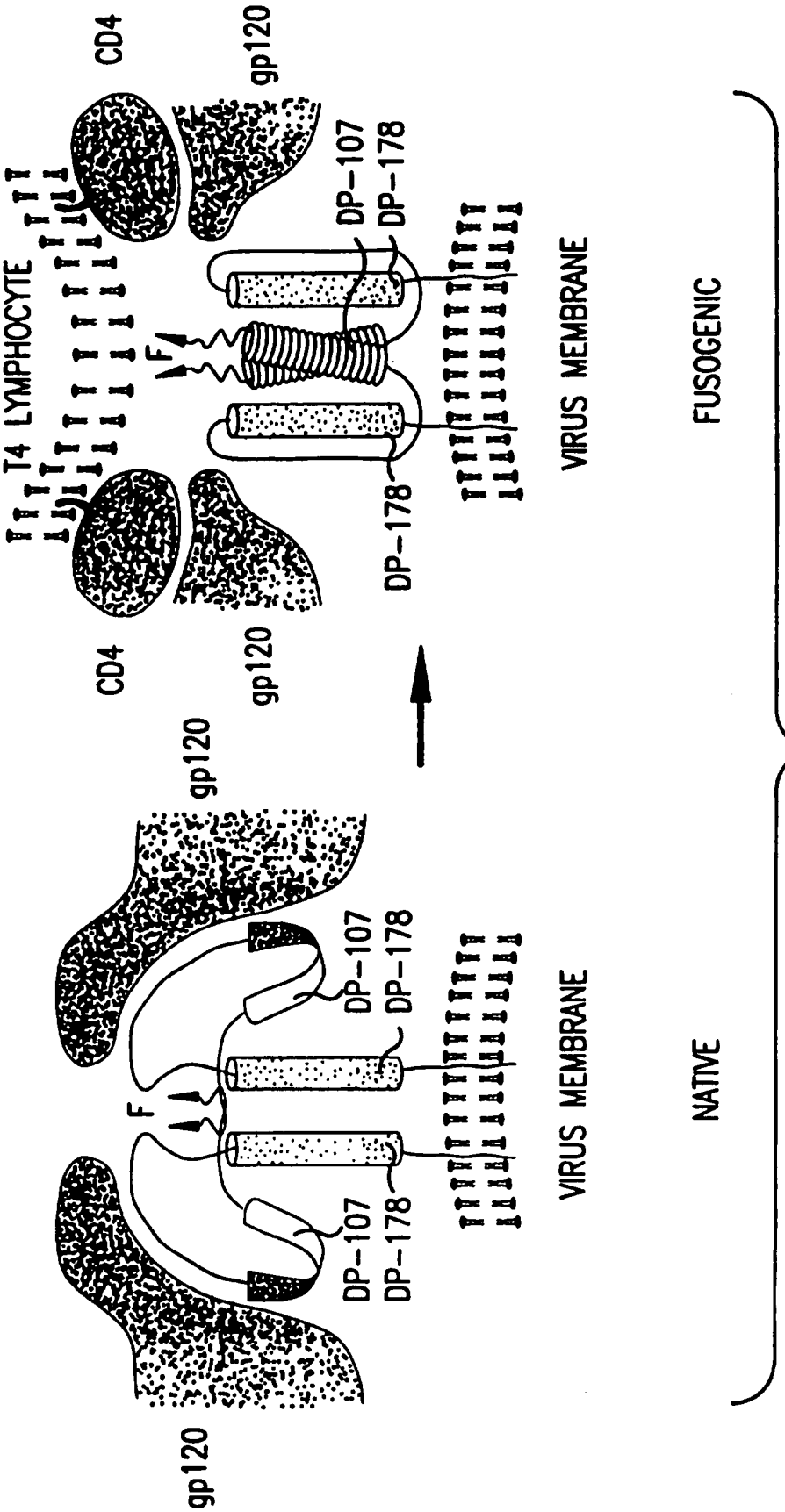

T4 LYMPHOCYTE
CD4
gp120
DP-107
DP-178
F
VIRUS MEMBRANE
FUSOGENIC
NATIVE

FIG.11B

Sequence	Positions																																Motifs
	A			D			A			D			A			D			A			D			A			D			A			D	
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L						[LMW] {CFGIMPTW}
C-FOS (fos_human)	T	D	T	L	Q	A	E	T	D	Q	L	E	D	E	K	S	A	L	Q	T	E	I	A	N	L	L	K	E						[IKLT] {CFGHIMPRVWY}
C-JUN (jap1_human)	I	A	R	L	E	E	K	V	K	T	L	K	A	Q	N	S	E	L	A	S	T	A	N	M	L	R	E	Q						[AILNV] {CDFGHILPVWY}
C-MYC (myo_human)	E	Q	K	L	I	S	E	E	D	L	L	E	K	R	R	E	Q	L	K	H	K	L	E	Q	L	R	N	S						[ELR] {ACFGMPVWY}
FLU LOOP 36	I	E	K	T	N	E	K	F	H	Q	I	E	K	E	F	S	E	V	E	G	R	I	Q	D	L	E	K	Y						[FILTV] {ACFLMPTVW}

FIG.12

| Sequence | Positions | | |

| Sequence | Positions | | |

Sequence	Positions																															Parent Motif	Hybrid Motif
	A		D			A		D		A		D		A		D		A		D		A		D								
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L				[LMNV] {CFGIMPTW}	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K				[EKLQY] {ACFGMPRVWY}	[EKLMNQVY] {CFGMPW}
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	[EKLQWY] {CFGMPRVY}	[EKLMNQVWY] {CFGMP}
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFKLQWY] {CFGMPRVY}	[EFKLMNQVWY] {CFGMP}
DP-178 (env_hv1bru)Y1=D			Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K				[EILNQSY] {ACFGMPRVWY}	[EILMNQSVY] {CFGMPW}
DP-178 (env_hv1bru)Y1=D			Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	[EILNQSWY] {CFGMPRVY}	[EILMNQSVWY] {CFGMP}
DP-178 (env_hv1bru)Y1=D			Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}	[EFILMNQSVWY] {CFGMP}

FIG.15

| Sequence | Positions | | |

| | Positions | | |

| Sequence | Positions | | |

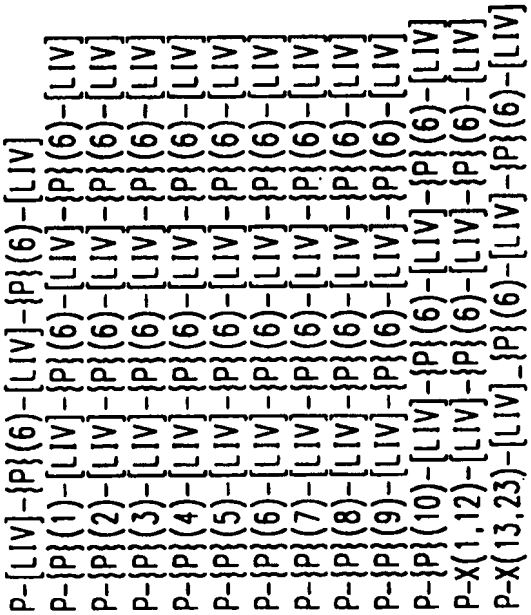

P-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(1)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(2)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(3)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(4)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(5)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(6)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(7)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(8)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(9)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(10)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-X(1,12)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-X(13,23)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]

FIG.19

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....FLGFLG A AGSTMGARSM TLTVQARQ ♠LL SGIVQQQ *DP107-NNL*

LRAIEAQQHL LQLTVWGIKQ LQARILAVER YLKDQ-DP107 QLLG♠♥ I WGC

♠107x178x4♠
♥ALLMOTI5♥ *LVS Coiled-Coil*
SGKLICT TAVP ♥WNASWS NKSLEQIWNN MTWM *E ♠WDRELNN *DP178-*

YTSLIHSL IEESQNQQEK NEQELLELDK WASLWNWF-DP178* NI

♦Transmembrane Region♦
TNWLWYIK♠ ♦IF IMIVGGLVGL RIVFAVLSIV NRVRQGYS♥ PL

♣P23LZIPC♣
SFQTHLPTPR GPDR ♣PEGIEE EGGERDRDRS IRLVNGSLAL IWDDLRSL♣ CL

♥ALLMOTI5♥ ♠107x178x4♠
F ♥SYHRLRDLL LIVTRIVELL GRRGW ♠EALKY WWNLLQYWSQ

ELKNSAVSLL NAT♠ AIAVAEG TDRVIEVVQG A♥ CRAIRHIPR

RIRQGLERIL L

FIG. 20

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....FLGFL LGVGSAIAS GVA ♠VSKVLHL EGEVNKIKSA

♣P1&12LZIPC♣
LLSTNKAVVS LSNGVSVLTS KVLDLKNYID KQ♠♥ LL ♣PIVNKQ

♠107x178x4♠
SC ♠SISNIETV I♣ EFQQKNNRLLEITREFSVNAG♠ VTTPVSTMLTNSELLSL

♣P1&12LZIPC♣
♥ALLMOTI5♥
INDM ♣PI ♥TNDQ KKLMSNNVQI V♣ RQQSYSI♣ MS IIKEEVLAYV

VQ♥ LPLYGVID TPCWKLHTSP LCTTNTKEGS NICLTRTDRG WYCDNAGSVS

FFPQAETCKV QSNRVFCDTM NSLTLPSEIN LCNVDIFNPK

YDCKIMTSKT DVSSSVITSL GAIVSCYGKT KCTASNKNRG

IIKTFSNGCDYVSNKGMDTV SVGNTLYYVN KQEGKSLYVK G

♣P7, 12, & 23LZIPC♣
♠107x178x4♠ ♥ALLMOTI5♥
EPIINFYDPLVF ♣PSDE ♠FDASISQVNEKINQSLAF ♥I♣ RKSDELL♣

♦Transmembrane Region♦
IINVNA♠ GK STTN ♦IMITTIIVIIVILLS LIAVGLLLY♥ C♦

KARSTPVTLS KDQLSGINNI AFSN

FIG. 21

Fusion
Peptide ♥ALLMOTI5♥ ♠107x178x4♠
.....FLGFLG ♥AAGTA MGAAA ♠TALTVQSQHLLAGILQQQKNLLAAV

♠107x178x4♠
EAQ♠ QQM ♠LKLTIWGVKNLNARVTALEKYLEDQARLN♠ AWG♥ CA

LVS Coiled-Coil
♥ALLMOTI5♥ ♠107x178x4♠
WKQVCHTTVP WQWNNRTPDW ♥NNMT *WLE ♠WERQISYLEGNIT

♠107x178x4♠
TQLEEARAQEEKNLD♠ AYQKLSS* WSDFWSW♥ FDF ♠SKWLN ♦ILK

♦Transmembrane Region♦
IGFLDVLGIIGLRLLYTV♦ YS♠ CIARVRQGYS PLSPQIHIHP WKGQPDNAEG

PGEGGDKRKN SSEPWQKESG TAEWKSNWCK RLTNWCSISS IWLYNS

♥ALLMOTI5♥
♥CLTL LVHLRSAFQY IQYGLGELKA AAQEAVVALA RLAQNAGYQIWL♥

ACRSAYRA IINSPRRVRQ GLEGILN

FIG. 22

Fusion ♠107x178x4♠
Peptide ♥ALLMOTI5♥ *LVS Coiled-Coil*
.....FAG ♥YVL AGVALGVATA AQITAGIALHQ ♠*SNLNAQAIQ

SLRTSLEQSNKAIEEIREATQETVIA* VQGVQDY♠ VNNEL♥ VP

♥ALLMOTI5♥
♠107x178x4♠
♣P6 & 12LZIPC♣
AMQHMSCELVGQRLGLRLLRYYTELLSIFGPSLRD ♣PISA ♠♥EISIQALIYAL

GGEIHKILEKLGYSGSD♠ MIAILESRGIKTKI♥ THVDLPGKF IILSISY

♣P1 & 12LZIPC♣
♣PTLSEVKGVIVHRLEAV♣ SYNIGSQEWYTTVPRYIATNGYLISNFDESSCVFVS

ESAICSQNSL YPMSPLLQQC IRGDTSSCAR TLVSGTMGNK FILSKGNIVA

NCASILCKCY STSTIINQSP DKLLTFIASD TCPLVEIDGA TIQVGGRQYP

LVS Coiled-Coil
♥ALLMOTI5♥
♣P12 & 23LZIPC♣
DMVYEGKVAL G ♣PAISLD ♥RL*DVGTNLGNALKKLDDAIKVLI♣

♦Transmembrane Region♦
DSS♣ NQILETVR RS♥* SFN ♦FGSLL SVPILSCTAL ALLLLIYCC♦

K RRYQQTLKQH TKVDPAFKPD LTGTSKSYVR SL

FIG. 23

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....FIGAI IGSVALGVA TAAQITAASA LIQANQNAAN ♠ILRLKESTA

TIEAVHEVTDGLSQLAVA♠ VG KM♥ QQFVNDQFNNTAQELDCIKITQQV

♥ALLMOTI5♥
GVELNLYLTELTTV FGPQITSPAL ♥TQLTIQALYNAGGNMDYLLTKLGVG

♣P1 & 12LZIPC♣
NNQLSSLIGSGLIT GN♥ ♣PILYDSQT QLLGIQVTLP SVGNLNNMRATYLET

LSVST TKGFASALVP KVVTQVGSVI EELDTSYCIE TDLDLYCTRI VTFPMSPGIY

SCLNGNTSAC MYSKTEGALT TPYMTLKGSV IANCKMTTCR CADPPGIISQ

♥ALLMOTI5♥
♠107x178x4♠
NYGEAVSLID RHSCN ♠♥VLSLD GITLRLSGEF DATYQKNISI LDSQVIVTG

LVS Coiled-Coil ♦Trans-
NLDISTELGNV NNSISNALDK LEESNSKLDK VNVKLTSTSA ♦LIT YIA

membrane Region♦
LTAISLVCGILSLV♥♠ LACYLMY♦ KQKAQQKTLLWLGNNTLGQMRATTKM

FIG. 24

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠ *LVS Coiled-Coil*
.....FFGGV ♠IG ♥TIALG *VATSAQITAAVALVEAKQARSDIEKLKE

AIRDTNKAVQSVQSSIGNLIVAIKSVQ* DYVNKE♥♠ IVPSIARLGCEAAG

♥ALLMOTI5♥
♠107x178x4♠
LQLGIALTQH ♠♥YSELTNIFGDNIGSLQEKGIKLQGIASLYRTNITE♥♠

♣P5 & 12LZIPC♣
IFTTSTVDKYDIYDLLFTESIKVRVIDVDLNDYSITLQVRL ♣PLLTRLLNTQIYR

VDSISYNI♣ QNREWYI♣ PLPSHIMTKGAFLGGADVKECIEAFSSYIC

PSDPGFVLNHEMESCLSGNISQCPRTVVKSDIVPRYAFVNGGVVANCITT

TCTCNGIGNRINQPPDQGVKIITHKECNTIGINGMLFNTNKEGTLAFYTP

♥ALLMOTI5♥
♠107x178x4♠
♣P6 & 23LZIPC♣
NDITLNNSVALD ♣PIDI ♠SIELN ♥KAKSDLEESKEWI♣ RRSNQKL♣

♦Transmembrane Region♦
DSIGNWHQSSTT ♦IIIV♠ LIM IIILFIINVT II♦ IIAVKYY♥ R

IQKRNRVDQN DKPYVLTNK

FIG. 25

Fusion
Peptide
.....GLFGAI AGFIENGWEGMIDGWYGFRHQNSEGTG

♠107x178x4♠
♥ALLMOTI5♥
LVS Coiled-Coil
*Q ♥AADLKST ♠QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQ

DLEKYVEDTKIDL* WSYNAELLVALENQHTI♠ DLT♥ DSEMNKLFEKTR

RQLRENAEEMGNGCFKIYHKCDNACIESIRNGTYDHDVYRDEALNNRFQIKG

VELKSGYKDWILWISFAISCFLLCVVLLGFIMWACQRGNIRCNICI

FIG. 26

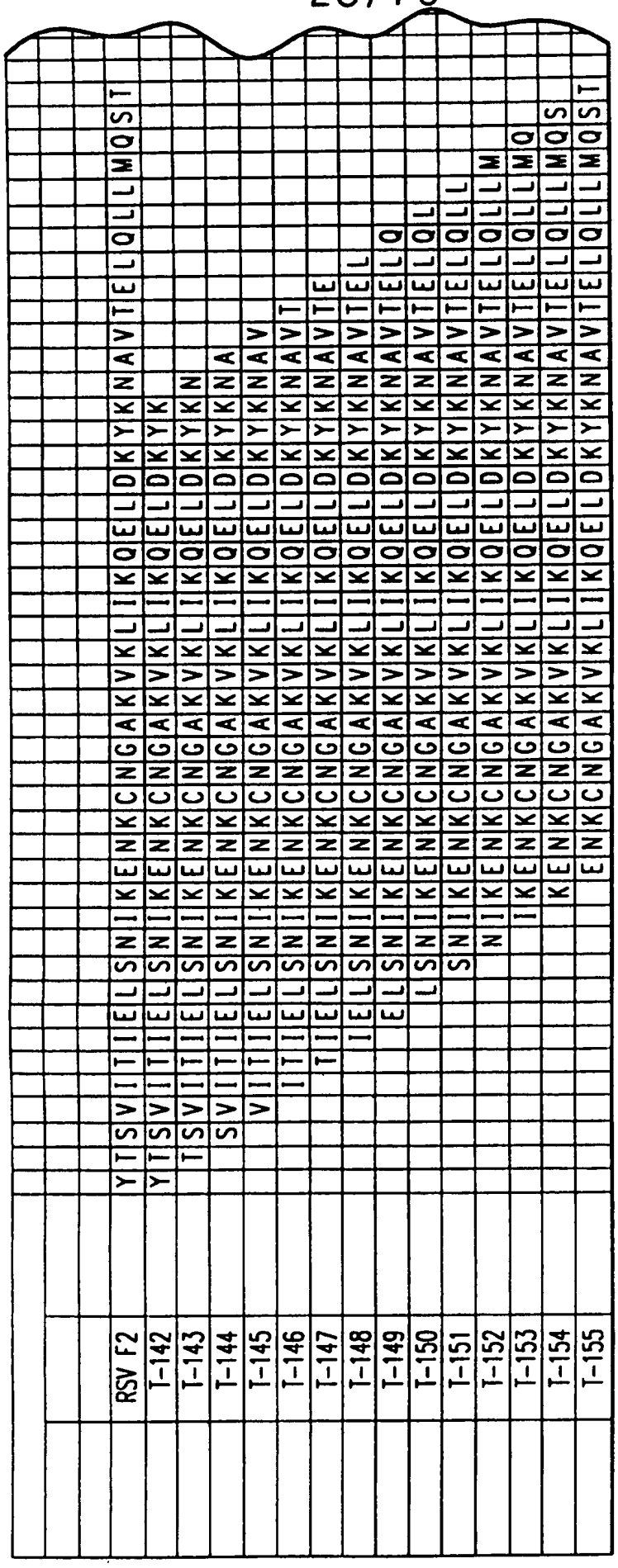

RSV F2
T-142
T-143
T-144
T-145
T-146
T-147
T-148
T-149
T-150
T-151
T-152
T-153
T-154
T-155

FIG.27A

	FUSION ARRAY		
	PURIFIED		
	IC50 (XTT)		
RSV F2	(μg/ml)	AV	CD
T-142	39	++	++
T-143	31	++	+++
T-144	114	+	++
T-145	40	++	+
T-146	281	-	-
T-147	204	-	-
T-148	354	-	-
T-149	336	-	-
T-150	342	-	+
T-151	116	+/-	+
T-152	117	+/-	++
T-153	280	-	+
T-154	118	+/-	++
T-155	253	-	+

FIG.27B

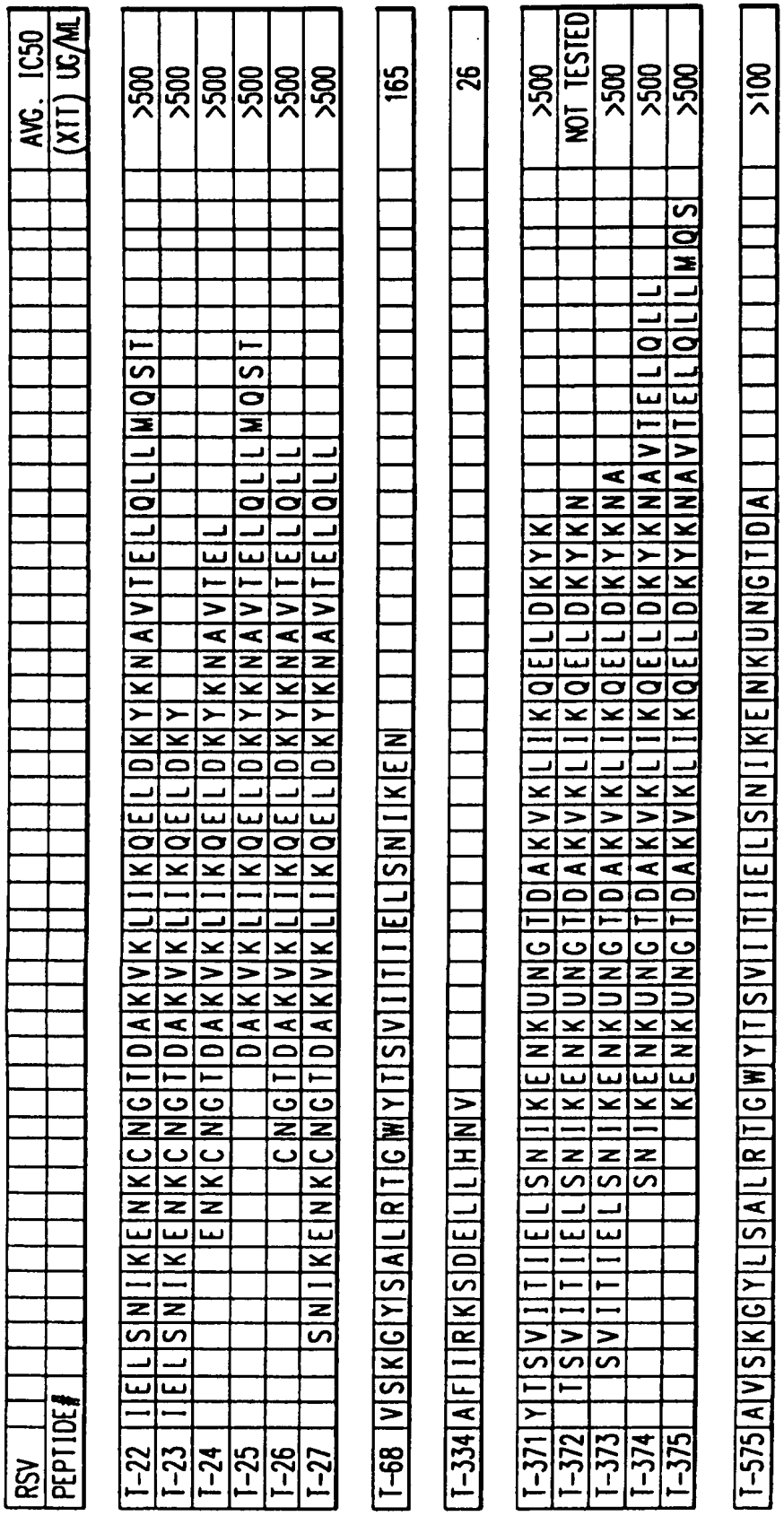

RSV
PEPTIDE#
AVG. IC50
(XTT) UG/ML
T-22 IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST >500
T-23 IELSNIKENKCNGTDAKVKLIKQELDKY >500
T-24 ENKCNGTDAKVKLIKQELDKYKNAVTEL >500
T-25 DAKVKLIKQELDKYKNAVTELQLLMQST >500
T-26 CNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-27 SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-68 VSKGYSALRTGWYTSVIITIELSNIKEN 165
T-334 AFIIRKSDELLHNV 26
T-371 YTSVIITIELSNIKENKUNGTDAKVKLIKQELDKYK >500
T-372 TSVIITIELSNIKENKUNGTDAKVKLIKQELDKYKN NOT TESTED
T-373 SVIITIELSNIKENKUNGTDAKVKLIKQELDKYKNA >500
T-374 SNIKENKUNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-375 KENKUNGTDAKVKLIIKQELDKYKNAVTELQLLMQS >500
T-575 AVSKGYLSALRTGWYTSVIITIELSNIKENKUNGTDA >100

FIG.27C

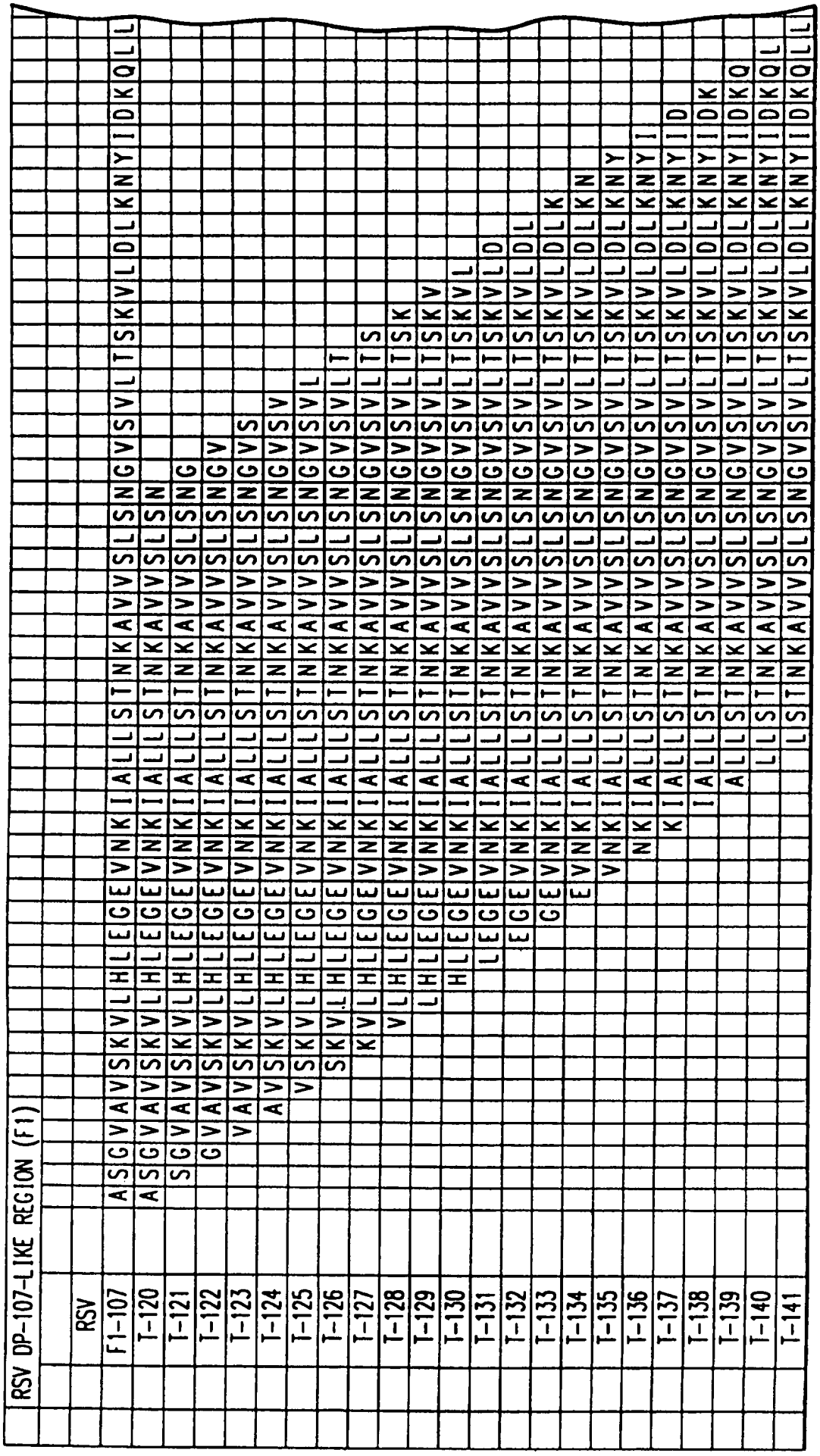

RSV DP-107-LIKE REGION (F1)
RSV
F1-107 ASGVAVSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-120 ASGVAVSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-121 SGVAVSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-122 GVAVSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-123 VAVSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-124 AVSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-125 VSKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-126 SKVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-127 KVLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-128 VLHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-129 LHLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-130 HLEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-131 LEGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-132 EGEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-133 GEVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-134 EVNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-135 VNKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-136 NKIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-137 KIALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-138 IALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-139 ALLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-140 LLSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL
T-141 LSTNKAVVSLLSNGVSVLTSKVLDLKNYIDKQLL

FIG.27D

		FUSION ASSAY	
		PURIFIED	
RSV		IC50 XTT	
F-107	AV	(µg/ml)	CD
T-120	-	204	-
T-121	-	354	-
T-122	-	347	-
T-123	+/-	126	-
T-124	+	95	-
T-125	+	84	-
T-126	+	89	-
T-127	+	89	-
T-128	-	206	-
T-129	-	343	-
T-130	-	177	-
T-131	+/-	118	-
T-132	-	272	-
T-133	+/-	307	-
T-134	+/-	187	-
T-135	+	60	-
T-136	-	194	-
T-137	+	99	-
T-138	++	38	-
T-139	+	86	+/-
T-140	-	160	+/-
T-141	-	204	+/-

FIG.27E

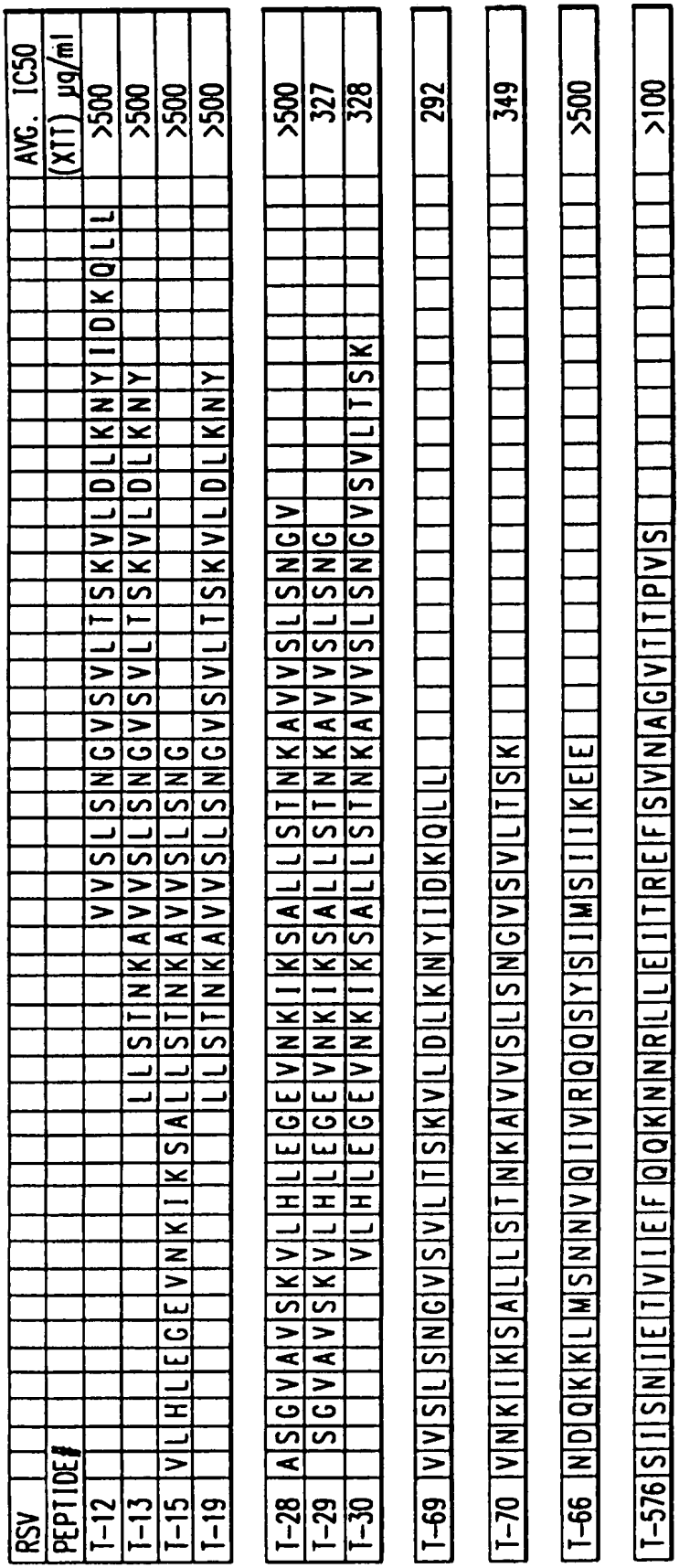

RSV
PEPTIDE#
AVG. IC50 (XTT) µg/ml
T-12 VVSLSNGVSVLTSKVLDLKNYIIDKQLL >500
T-13 LLSTNKAVVSLSNGVSVLTSKVLDLKNY >500
T-15 VLHLEGEVNKIKSALLSTNKAVVSLSNG >500
T-19 LLSTNKAVVSLSNGVSVLTSKVLDLKNY >500
T-28 ASGVAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGV >500
T-29 SGVAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNG 327
T-30 VLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLTSK 328
T-69 VVSLSNGVSVLTSKVLDLKNYIIDKQLL 292
T-70 VNKIIKSALLSTNKAVVSLISNGVSVLTSK 349
T-66 NDQKKLMSNNVQIIVRQQSYSIIMSIIKEE >500
T-576 SIISNIIETVIIEFQQKNNRILLEIITREEFSVNAGVTTPVS >100

FIG.27F

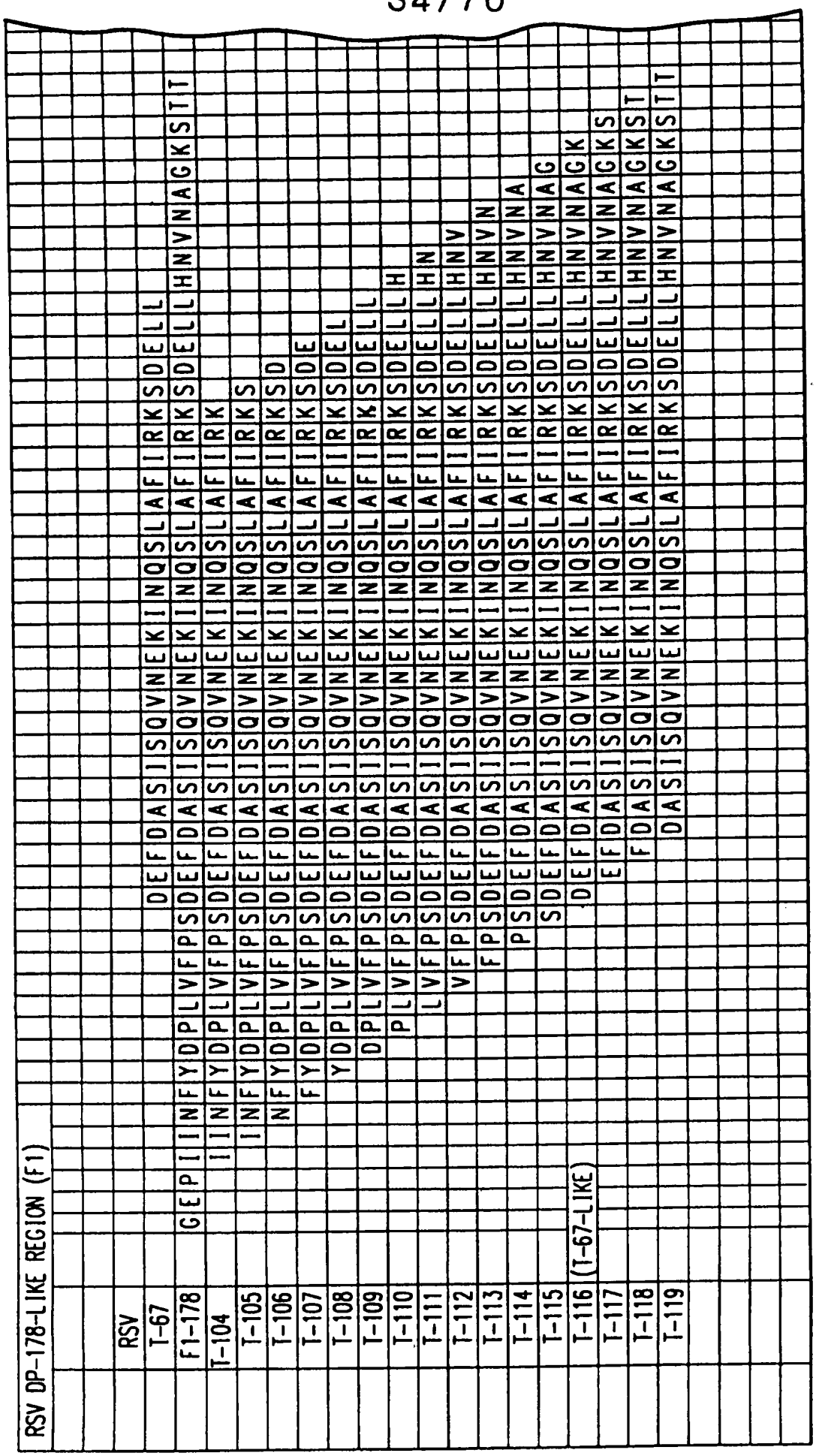
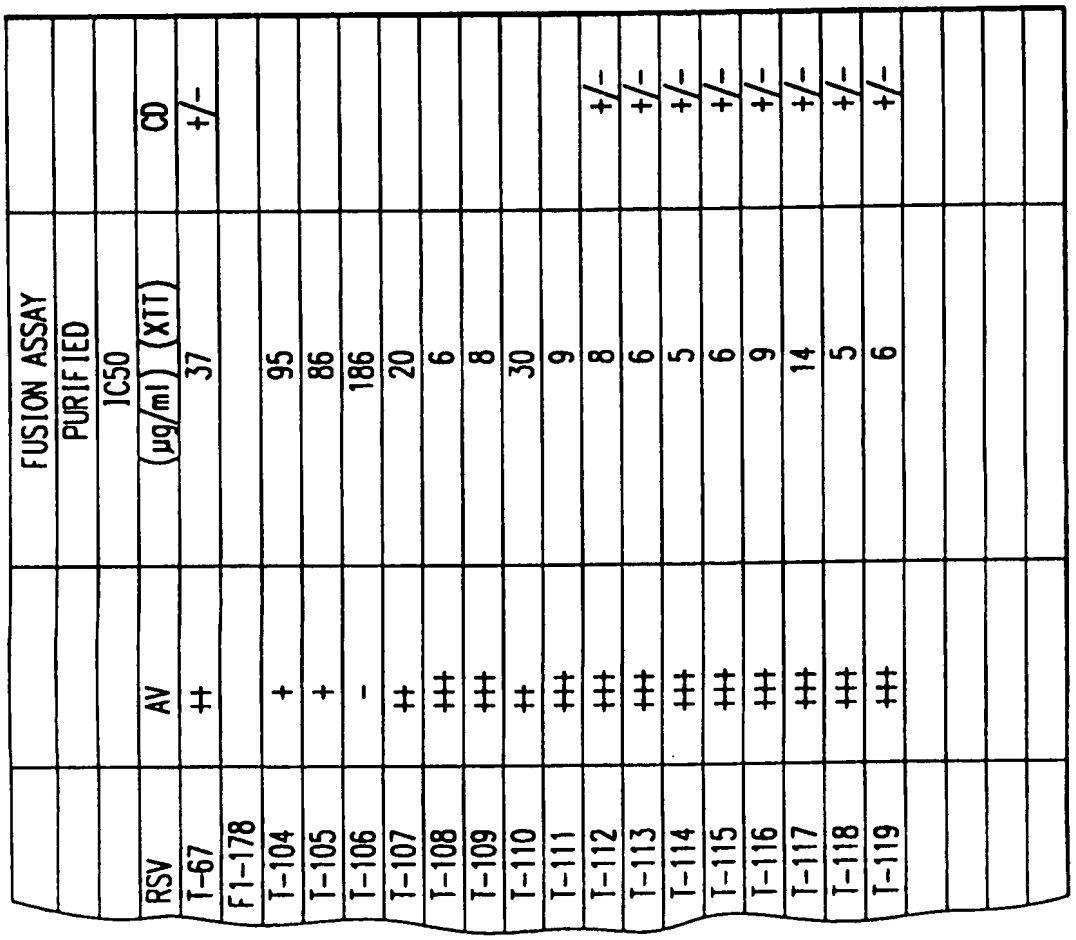

RSV DP-178-LIKE REGION (F1)
RSV
T-67
F1-178
T-104
T-105
T-106
T-107
T-108
T-109
T-110
T-111
T-112
T-113
T-114
T-115
T-116 (T-67-LIKE)
T-117
T-118
T-119

FIG.28A



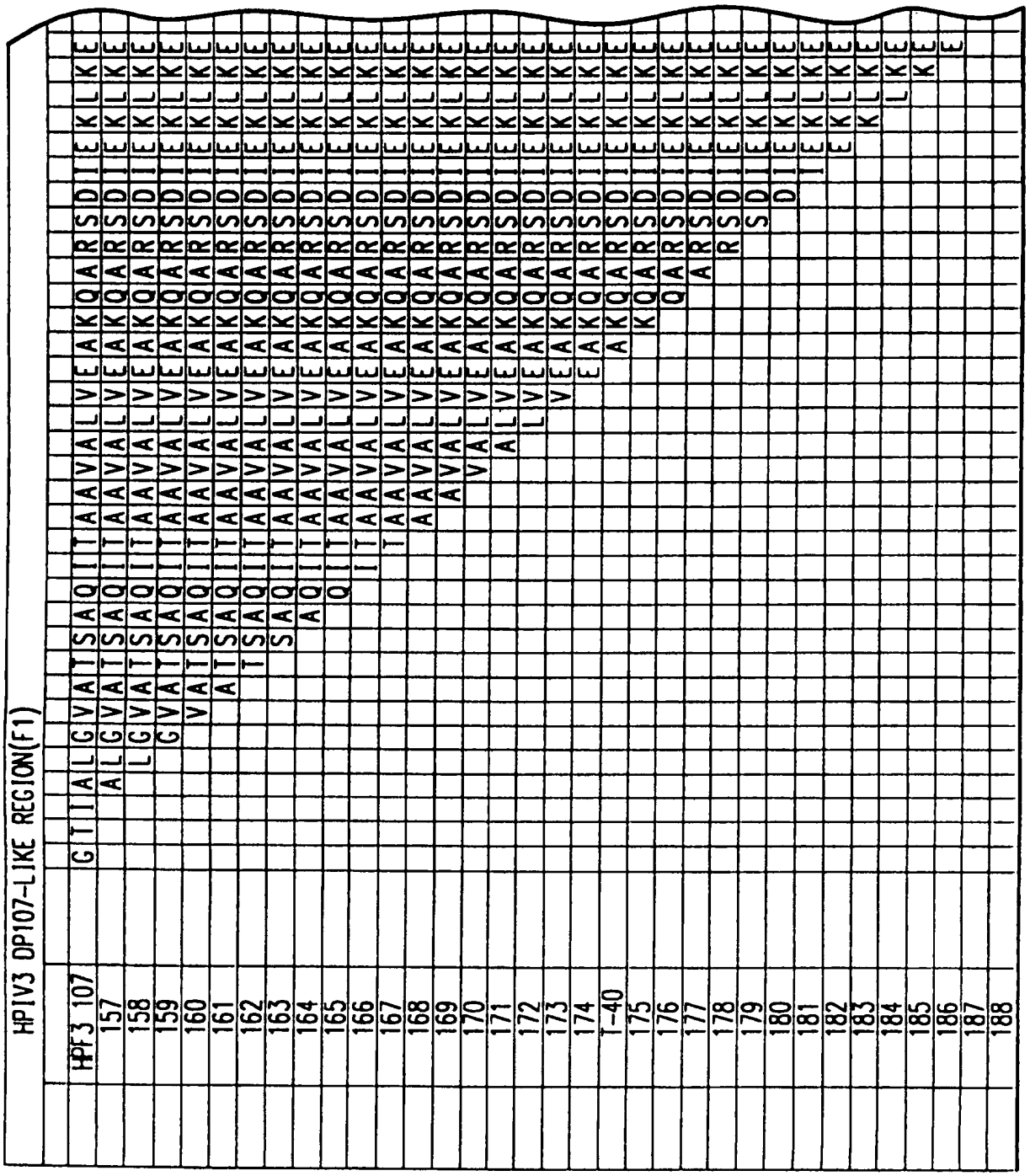
		FUSION ASSAY		
		PURIFIED		
		IC50		
RSV	AV	(µg/ml) (XTT)	CD	
T-67	++	37	+/-	
F1-178				
T-104	+	95		
T-105	+	86		
T-106	-	186		
T-107	++	20		
T-108	+++	6		
T-109	+++	8		
T-110	++	30		
T-111	+++	9		
T-112	+++	8	+/-	
T-113	+++	6	+/-	
T-114	+++	5	+/-	
T-115	+++	6	+/-	
T-116	+++	9	+/-	
T-117	+++	14	+/-	
T-118	+++	5	+/-	
T-119	+++	6	+/-	

FIG.28B

RSV PEPTIDE#	AVG. IC50 (XTT) ug/ml
T-71 PIINFYDPLVFPSDEFDASISQVNEKINQSLAFIR	138
T-384 RMKQLEDKVEELLSKLAFIRKSDELLHNV	NOT TESTED
T-613 DELLHNVNAGKST	>100
T-614 KSDELLHNVNAGKST	>100
T-615 IRKSDELLHNVNAGKST	>100
T-616 AFIRKSDELLHNVNAGKST	>100
T-617 FDASISQVNEKINQSLAFI	NOT TESTED
T-662 SLAFIRKSDELLHNVNAGKST	>100
T-663 FDASISQVNEKINQSLAFIRK	NOT TESTED
T-665 FDASISQVNEKINQSLAFIRKSDELLHNVNAGK	7
T-666 FDASISQVNEKINQSLAFIRKSDELLHNVNA	4
T-667 FDASISQVNEKINQSLAFIRKSDELLHNV	4
T-668 FDASISQVNEKINQSLAFIRKSDELLH	5
T-669 FDASISQVNEKINQSLAFIRKSDEL	80
T-670 FDASISQVNEKINQSLAFIRKSD	>100
T-671 ASISQVNEKINQSLAFIRKSDELLHNVNAGKST	8
T-672 ISQVNEKINQSLAFIRKSDELLHNVNAGKST	6
T-673 QVNEKINQSLAFIRKSDELLHNVNAGKST	14
T-674 NEKINQSLAFIRKSDELLHNVNAGKST	>100
T-675 KINQSLAFIRKSDELLHNVNAGKST	>100
T-676 NQSLAFIRKSDELLHNVNAGKST	>100
T-730 FDASISQVNEKINQSLAFIRKSDELLHNVNAGKST	NOT TESTED

FIG.28C

FIG.29A


HPIV3 DP107-LIKE REGION(F1)
HPF3 107
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
T-40
175
176
177
178
179
180
181
182
183
184
185
186
187
188

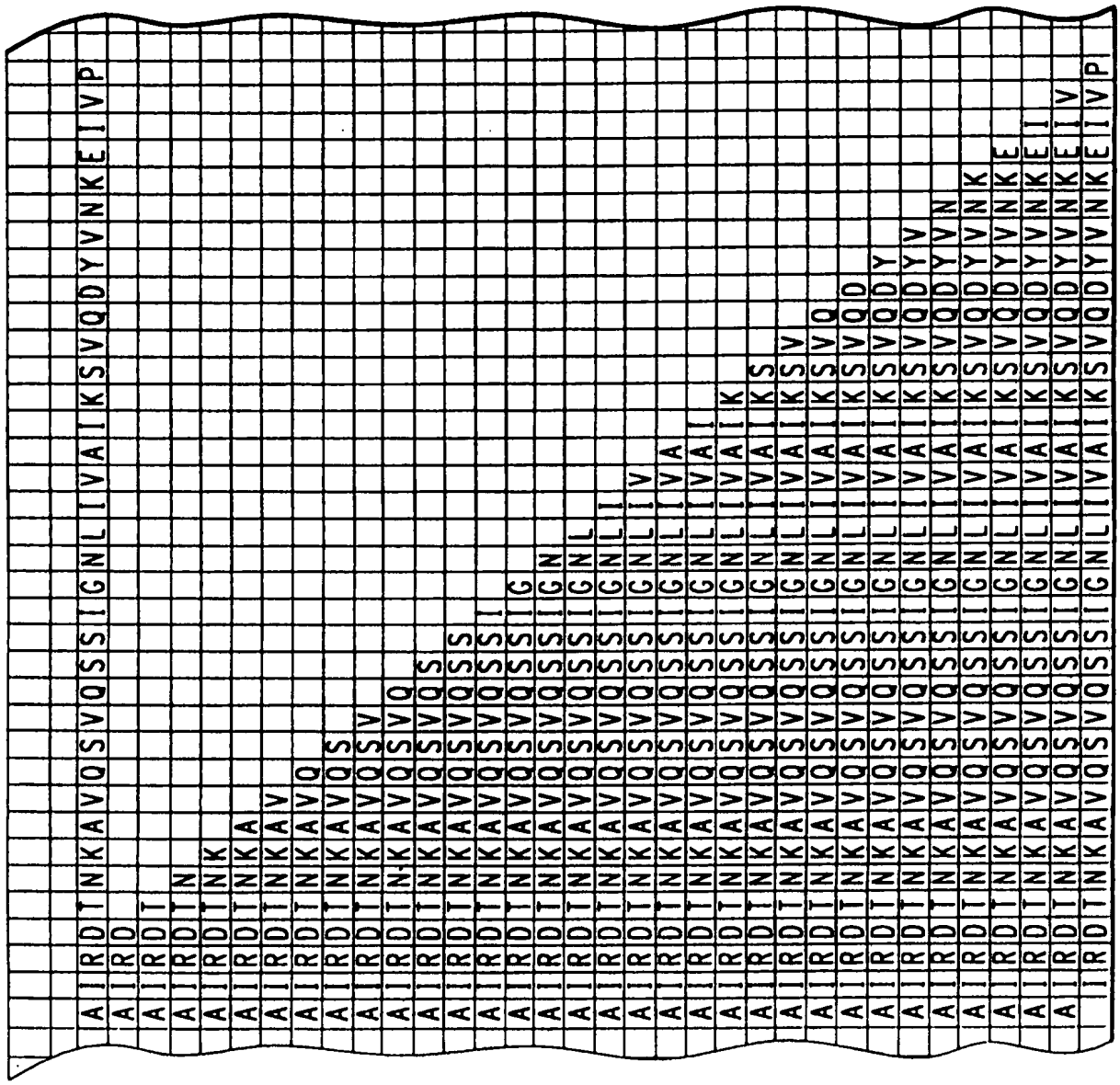
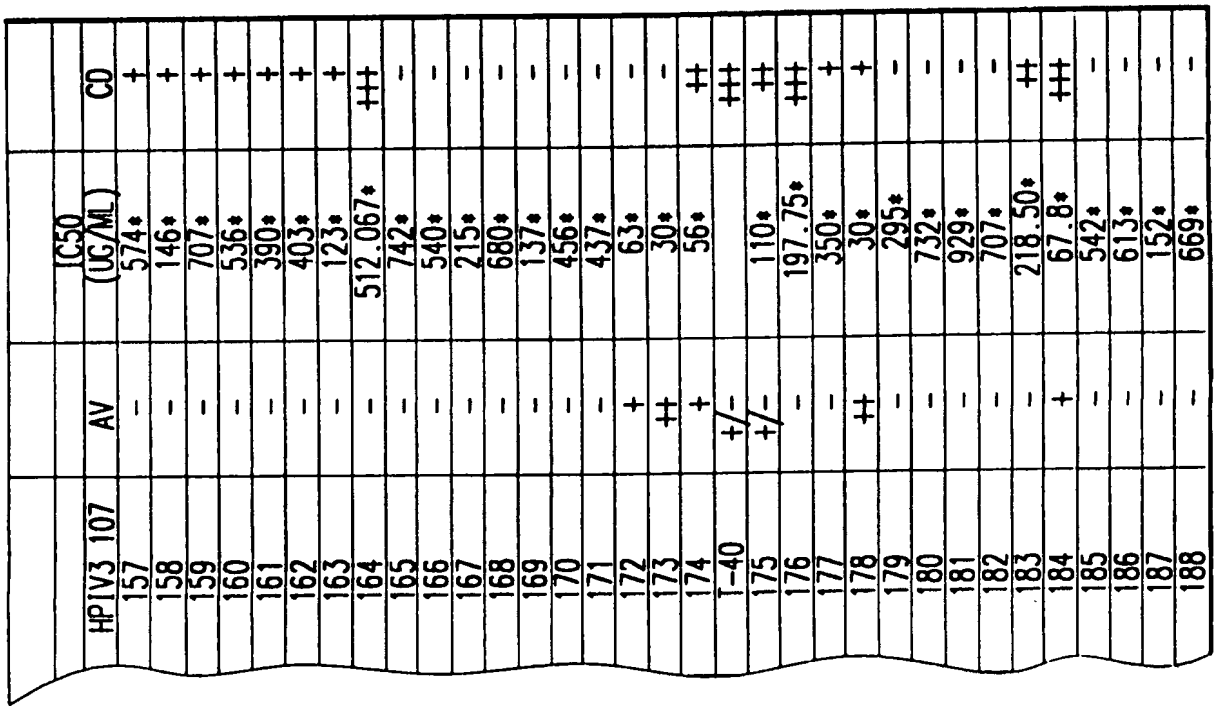


FIG.29B



HPIV3 107	AV	IC50 (UG/ML)	CD
157	-	574*	+
158	-	146*	+
159	-	707*	+
160	-	536*	+
161	-	390*	+
162	-	403*	+
163	-	123*	+
164	-	512.067*	++
165	-	742*	-
166	-	540*	-
167	-	215*	-
168	-	680*	-
169	-	137*	-
170	-	456*	-
171	-	437*	-
172	+	63*	-
173	++	30*	-
174	+	56*	++
T-40	+/-		+++
175	+/-	110*	++
176	-	197.75*	+++
177	-	350*	+
178	++	30*	+
179	-	295*	-
180	-	732*	-
181	-	929*	-
182	-	707*	-
183	-	218.50*	++
184	+	67.8*	+++
185	-	542*	-
186	-	613*	-
187	-	152*	-
188	-	669*	-

FIG.29C

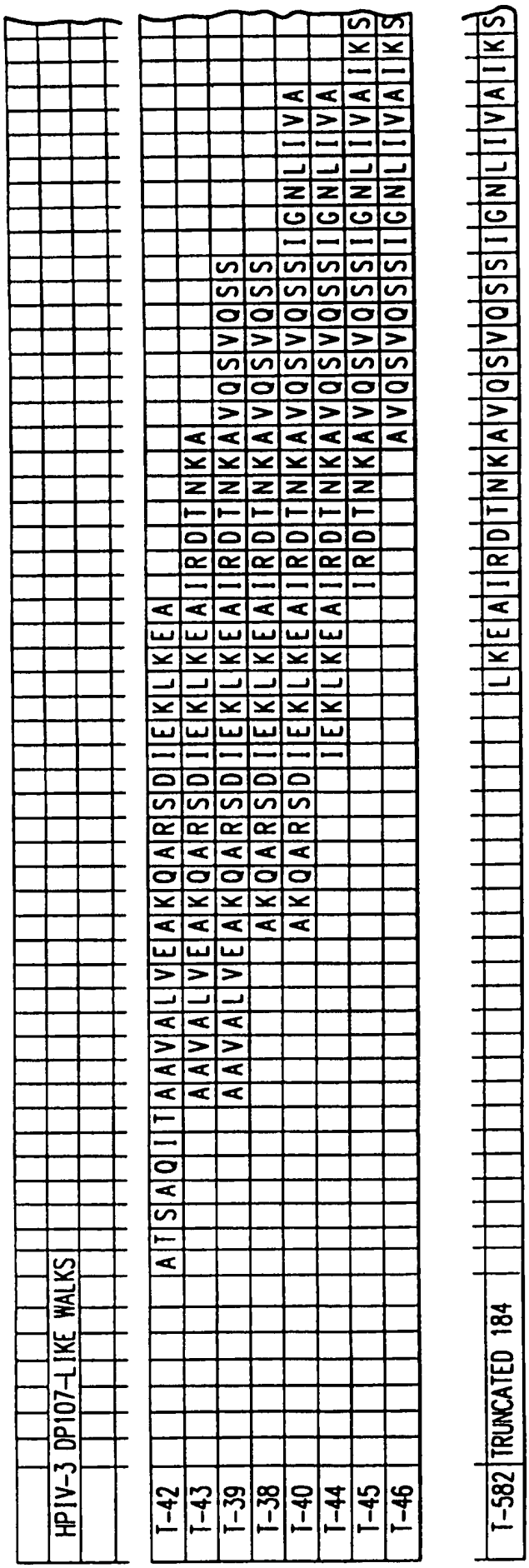

HP1V-3 DP107-LIKE WALKS
T-42
T-43
T-39
T-38
T-40
T-44
T-45
T-46
T-582 TRUNCATED 184

FIG.29D

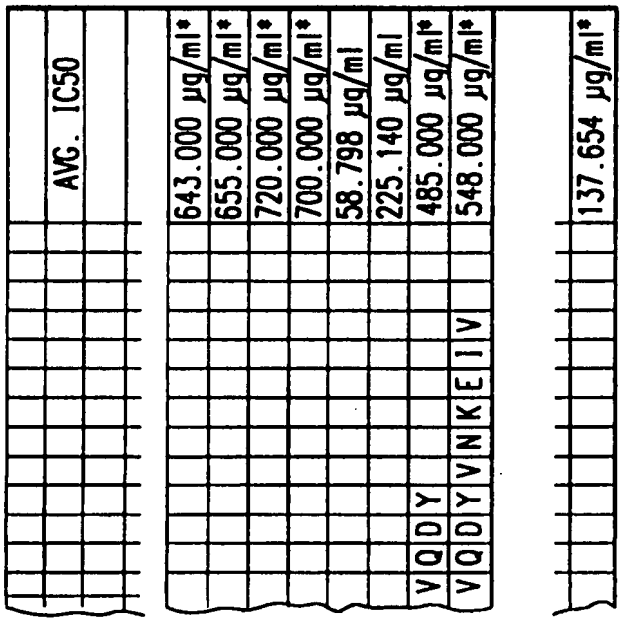

AVG. IC50
643.000 µg/ml*
655.000 µg/ml*
720.000 µg/ml*
700.000 µg/ml*
58.798 µg/ml
225.140 µg/ml
485.000 µg/ml*
548.000 µg/ml*
137.654 µg/ml*
VQDY
VQDYVNKEIIV

FIG.29E

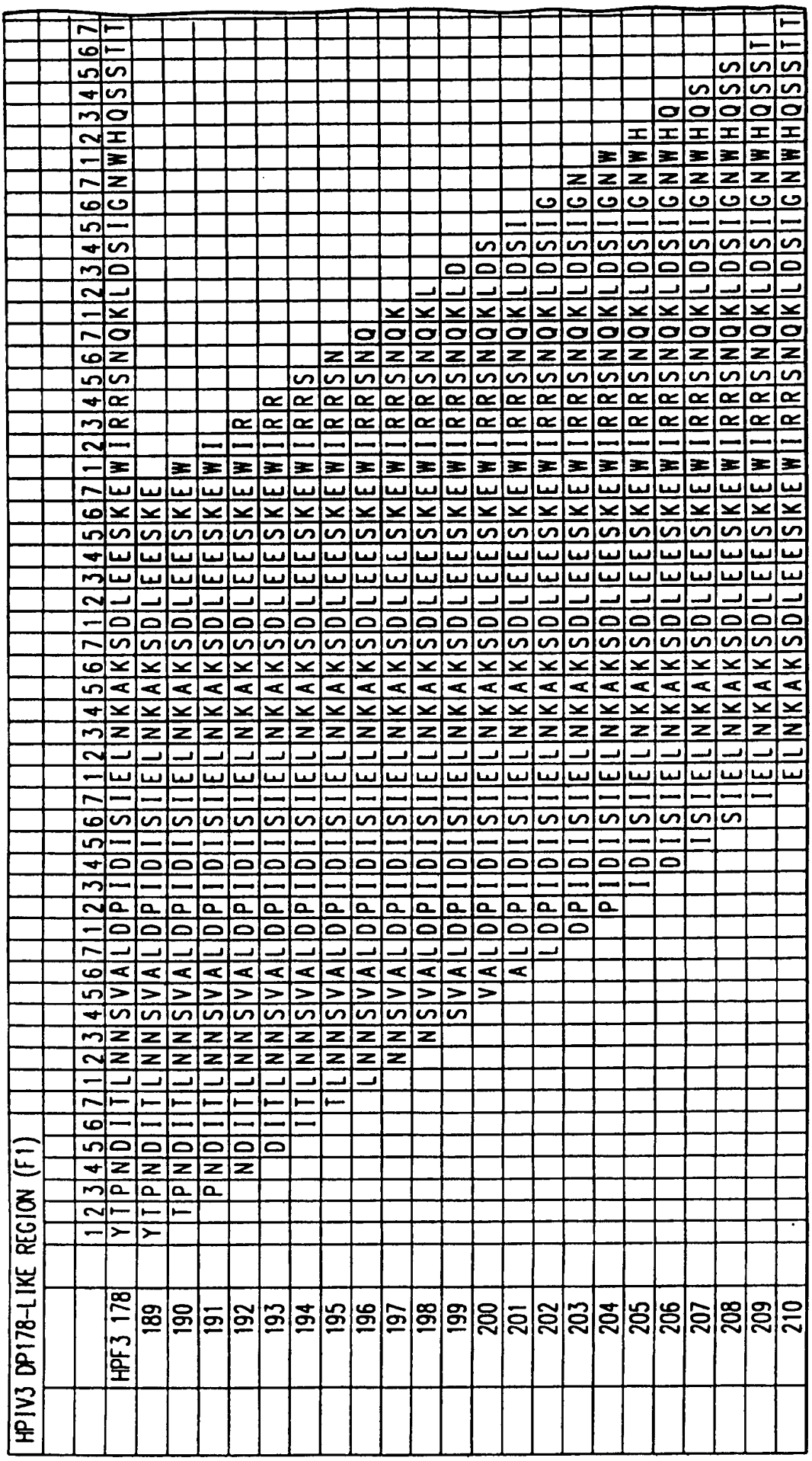

HPIV3 DP178-LIKE REGION (F1)
HPF3 178
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210

FIG.30A

HP1V3 178	AV	IC50 (μg/ml)	CD
189	-	827*	-
190	-	775*	-
191	-	612*	-
192	-	699*	-
193	-	525*	-
194	+	61*	-
195	+	49	++
196	++	3.1	+
197	++	71.15	++
198	+++	0.325	+
199	++	2.3*	+
200	++	1.0*	++
201	+++	0.224*	+
202	+++		+
203	+++	0.390*	+
204	+++	0.213	+
205	+++	0.174	+
206	++	2.0*	+
207	++	2.0*	+
208	++	37*	+
209	++	1.0*	+
210	++	2.0*	+

FIG.30B

T-269	TRUNCATED 201	EWIRRSNQKLDSI	457.500UG/ML
T-626	205 MUTANT	IDISIELNKAKSDLEESKEWIKKSNQKLDSIGNWH	209.589NG/ML
T-383	RMKQLEDKVEELLSKLEWIRRSNQKLDSI		NOT DONE
T-577	DQQIKQYKRLLDRLIIPLYDGLRQKDVIVSNQESN		133.793UG/ML*
T-578	YSELTNIFGDNIGSLQEKGIKLQGIASLYRTNITEI		107.177UG/ML*
T-579	TSITLQVRLPLLTRLLNTQIYRVDSISYNIQNREWY		NOT DONE

FIG.30C

FUSION ♥ALLMOTI5♥
PEPTIDE ♠107x178x4♠
.....RNKRGVFVLGFLGFLATAGSAMGAAS ♠♥ XXXXAQSRTLLAGIVQQQQQ

LLDVVKRQQELLRLTVWGTKNLQTRVTAIEKYLKDQAQL♠NAWG♥ CAF

♥ALLMOTI5♥
*LVS PREDICTED COILED-COIL
RQVCHTTVPWPNASLTPDW *NND ♥TWQEWERKVDFLEENITALLEEAQIQQ

♠107x178x4♠
EKNMY ♠ELQKLNSWD* VF♥ GNXXXXXXXXXXXXXXXXXXXXXXXXXXX♠

IYIVMLAKLRQGYRPVFSSPPSYFQXTHTQQDPALPTREGKEGDGGEGGGNSSWP

WQIEYIHF

FIG. 31

MTRRRVLSVVVLLAALACRLGAQTPEQPAPPATTVQPTATRQQTSFPFRVCELSSHGDLFRFSSD

♠ 107x178x4♠

IQCPSFGTRENHTEGLLMVFKDNIIPYSF ♠ KVRSYTKIVTNILIYNGWYADSVTNRHE♠

EKFSVDSY ETDQMDTIYQ CYNAVKMTKD GLTRVYVDRD GVNITVNLKP TGGLANGVRR

YASQTELYDA PGWLIWTYRT RTTVNCLITD MMAKSNSPFD FFVTTTGQTV EMSPFYDGKN

KETFHERADS FHVRTNYKIV DYDNRGTNPQ GERRAFLDKG TYTLSWKLEN RTAYCPLQHW

QTFDSTIATE TGKSIHFVTD EGTSSFVTNT TVGIELPDAF KCIEEQVNKT HEKYEAVQD

RYTKGQEAIT YFITSGGLLL AWLPLTPRSL ATVKNLTELT TPTSSPPSSP SPPAPSAARG

STPAAVLRRR RRDAGNATTP VPPTAPGKSL GTLNNPATVQ IQFAYDSLRR QINRMLGDLA

RAWCLEQKRQ NMVLRELTKI NPTTVMSSIY GKAVAAKRLG DVISVSQCVP VNQATVTLRK

SMRVPGSETM CYSRPLVSFS FINDTKTYEG QLGTDNEIFL TKKMTEVCQA TSQYYFQSGN

♠107x178x4♠

EIHVYNDYHH FKTIELDGIA TLQTFISLNT ♠SLIENIDFASLELYSRDEQRASNVFD *LE♠

LVS PREDICTED COILED COIL TM Potential

GIFREYNFQAQNIAGLRKDLDNAVSN* GRNQ FVDGLGELMDSLGSVG QSITN

♣P12LZIPC♣

TM Potential TM Potential

LVSTVGGLFSSLVSGFISF FK N ♣PFGGMLILVLVAGVVILVISL♣ TRRTRQMS

QQPVQMLYPG IDELAQQHAS GEGPGINPIS KTELQAIMLA LHEQNQEQKR AAQRAAGPSV

ASRALQAARDRFPGLRRRRY HDPETAAALL GEAETEF

FIG. 32

MMDPNSTSED VKFTPDPYQV PFVQAFDQAT RVYQDLGGPS QAPLPCVLWP VLPEPLPQGQ

LTAYHVSTAP TGSWFSAPQP APENAYQAYA APQLFPVSDI TQNQQTNQAG GEAPQPGDNS

TVQTAAAVVF ACPGANQGQQ LADIGVPQPA PVAAPARRTR KPQQPESLEE CDSELEI

@DNA BINDING@ ♠107x178X4♠ +DIMERIZATION+
@KRY KNRVASRKCRAK ♠FK@ Q +LLQHYREVAAAKSSENDRLRLLLKQ♠

MCPSLDVD+ SI IPRTPDVLHE DLLNF

FIG. 33

FUSION
PEPTIDE ♥ALLMOTI5♥ *LVS COILED-COIL*
FAG ♥VVLAGAALGVATAAQITAGIALHQSML*NSQAIDNLRASLETTN

QAIEAIRQAGQEMI*LAVQGVQDYINN♥ ELIPSMNQLSCDLIGQKLGLKLLRYYT

♣P23LZIPC♣
♣P6,12LZIPC♣
♠107X178X4♠
♥ALLMOTI5♥
EILSLFGPSLRD ♣PISA ♠♥EISIQLSYALGGDINKV♣ LEKLGYSGGDL♣

♣P1,12LZIPC♣
LGILES♠ RGIKARI♥ THVDTESYFIVLSIAY ♣PTLSEIKGVIVHRLEGV♣ SY

NIGSQEWYTTVPKYVATQGYLISNFDESSCTFMPEGTVCSQNALYPMSPLLQECL

RGSTKSCARTLVSGSFGNRFILSQGNLIANCASILCKCYTTGTIINQDPDKILTYIAA

♣P23LZIPC♣
♣P12LZIPC♣
♥ALLMOTI5♥
LVS COILED-COIL
DHCPVVEVNGVTIQVGSRRYPDAVYLHRIDLGP ♣P ♥IS *LERLDVGTNLGN

♦TRANSMEMBRANE REGION♦
AIAKLEDAKELL♣ ESSDQI*L♣ RSMK ♦GLSSTSIVYILI♥ AVCLGGLIGIP

ALICCC♦ RGRCNKKGEQVGMSRPGLKPDLTGTSKSYVRSL

FIG. 34

Pre S1 and Pre S2
MGQNLSTSNPLGFFPDHQLDPAFRANTANPDWDFNPNKDTWPDANKVGAGAFG

LGFTPPHGGLLGWSPQAQGILQTLPANPPPASTNRQSGRQPTPLSPPLRNTHPQAM

QWNSTTFHQTLQDPRVRGLYFPAGGSSSGTVNPVLTTASPLSSIFSRIGDPALN

MAJOR SURFACE ANTIGEN(HBs)
FUSION
PEPTIDE
♣P12 & 23LZIPC♣
MENITSG **FLG ♣PLL** VLQAGFFLLTRILTI♣ PQSLDSWWTSLNFLGGTTVCLG

♣P12 & 23LZIPC♣
QNSQSPTSNHSPTSCPPTC ♣PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML♣

PVCPLIPGSSTTSTGPCRTCMTTAQGTSMYPSCCCTKPSDGNCTCIPIPSSWAFGKF

♦TRANSMEMBRANE REGION♦
LWEWASARFSWLS ♦**LLVPFVQWFVGLSPTVWLSVI**♦ WMMWYWGPSL

♦TRANSMEMBRANE REGION♦

♦**YSILSPFLPLLPIFFCLWVYI**♦

FIG. 35

FUSION ♥ ALLMOTI5 ♥ ♠107x 178x4♠
PEPTIDE *LVS COILED COIL
AIQLIPLFVG LGI ♥TTAVSTGAAGLGVS ♠IT *QYTKLSHQLISDV

QAISSTIQDLQDQVDSLAEVVLQ* NRRGLDLLTAE♠ QGGI♥

CLALQEKCCFYANKSGIVRDKIKNLQDDLERRRRQLIDNPFWTSFHG

FLPYVMPLLGPLLCLLLVLSFGPIIFNKLMTFIKHQIESIQAKPIQVIIYII

TRANSMEMBRANE REGION
RLEQEDSGGSYLTLT.....????????????????????????....

FIG. 36

MKAQKGFTLI ELMIVVAIIG ILAAIAPGQ

♠107x178x4♠
♥ALLMOTI5♥
♠♥YQDYTARTQVTRAVSEVSALKTAAESAILEGKEIVSSA♠ T♥

PK DTQYDIGFT

♠107x178x4♠
♥ALLMOTI5♥
♠♥ESTLLDGSGKSQIQVTDNQDGTVELVATLGKSSGS♠ AIKGAVITSR♥

KNDGV WNCKITKTPT AWKPNYAPAN CPKS

FIG. 37

MNTLQKGFTL IELMIVIAIV GILAAVALPA YQDYTARAQV

SEAILLAEGQ KSAVTEYYLN HGIWP

♠107x178x4♠
♥ALLMQTI5♥
♠♥KDNTSAGVASSSSIKGKYVKEVKVENGVVTAT♠

MNSSNVNKEIQGKKLSLWAKRQDGSVKW♥

FCGQP VTRNAKDDTV TADATGNDGK IDTKHLPSTC RDNFDAS

FIG. 38

MKKTLLGSLI LLAFAGNVQA DINTETSGKV TFFGKVVENT

CKVKTEHKNL SVVLNDVGKN SLSTKVNTAM PTPFTITLQN

CDPTTANGTA NKANKVGLYF Y

♠107x178x4♠
♥ALLMOTI5♥
♠♥SWKNVDKENNFTLKNEQTTADYATNVNI♠

QLMESNGTKAISVVGKETE♥

DF MHTNNNGVAL NQTHPNNAHI SGSTQLTTGT NELPLHFIAQ

YYATNKATAG KVQSSVDFQI AYE

FIG. 39

MNKKLLMNFF IVSPLLLATT ATDFTPVP

♠107x178x4♠
♥ALLMOTI5♥
♠♥LSSNQIIKTAKASTNDNIKDLLDWYSSGSDTFTNS♠♥

EVLDNSL GSMRIKNTDG SISLIIFPSP YYSPAFTKGE KV

♠107x178x4♠
♠DLNTKRTKKSQHTSEGTYIHFQISGVT♠

N TEKLPTPIEL PLKVKVHGKD SPLKYG

♣P12LZIPC♣
♣PKFDKKQLAISTLDFEIRHQLTQI♣

HGLYRSSDKT GGYWKITMND GSTYQSDLSK KFEYNTEKPP

INIDEIKTIE AEIN

FIG. 40

♥ALLMOTI5♥
MKKTAFILLL FIALTLTTSP L ♥VNG

♠107x178x4♠
LVS PREDICTED COILED-COIL
S ♠EKSEEINEKDLRKKSELQRNALSNLRQIY YYNEKAITENKESDD♠

QFLENTLL♥ FKG FFTGHPW

♠107x178x4♠
♠YNDLLVDLGSKDATNKYKGKKVDLYGAY♠

YGYQCAGGTPNKTACMYGGVTLHDN NRLTEEKKVP INLWIDGKQTTV

♣P12LZIPC♣
♣PIDKVKTSKKEVTVQELDL♣ QARHYLHGK FGLYNSDSFGGKVQ

♣P12LZIPC♣
RGLIVF HSSEGSTVSY DLFDAQGQY ♣P DTLLRIYRDN KTINSENLHI♣

DLYLYTT

FIG. 41

♥ALLMOTI5♥
MKKTAFTLLL FIALTLTTSP L ♥VNGS

♠107x178x4♠
♠EKSEEINEKDLRKKSELQGTALGNLKQIYYYNEKAKTENKESHD♠ Q♥

FLQHTILFKG FFTDHSWYND LLVDFDSKDI VDKYKGKKVDLYGAYY

GYQC AGGTPNKTAC MYGGVTLHDN NRLTEEKKVPINL WLDGKQNTV

♠107x178x4♠
♥ALLMOTI5♥
♣P12LZIPC♣
♣P ♥L ♠ETVKTNKKNVTVQELDLQARRYL♣ QEKYNLYN♠

SDVFDGKVQR♥ GLIVF HTSTE

♣P23LZIPC♣
♣PSVNYDLFGAQGQYSNTLLRIYRDNKTINSENMHI♣ DIYLYTS

FIG. 42

MKNITFIFFILLASPLYANGDRLYRADSRPPDEIKRFRSLMPRGNEYFDRGT

♥ALLMOTI5♥
♥QMNINLYDHARGTQTGFVRYDDGYV

♠107x178x4♠
♠STSLSLRSAHLAGQYILSGYSLTIYIVI♠ ANMFNVNDVISVY♥

SP HPYEQEVSAL GGIPYSQIYG WYRVNFGVID ERLHRNREYR

DRYYRNLNIA PAEDGYRLAG FPPDHQAWRE EPWIHHAPQG

CGDSSRTITG DTCNE

♥ALLMOTI5♥
♥ETQNLSTIYLREYQSKVKRQIFSDYQSEVDIYNRIRDEL♥

FIG. 43

MMFSGFNADY EASSSRCSSA SPAGDSLSYY HSPADSFSSM

GSPVNAQDFC TDLAVSSANF IPTVTAISTS PDLQWLVQPA

LVSSVAPSQT RAPHPFGVPA PSAGAYSRAG VVKTMTGGRA

LVS PREDICTED COILED-COIL

QSIGRRGKVE QLSPEEEEKR RIRRE *RNKMA AAK

♠107x178x4♠

♥ALLMOTI5♥

♥CRNRRREL ♠TDTLQAETDQLEDEKSALQTEIANLLKEKEKL♥

EFILAAHR* PACKIPDDL GFPEEMSVAS LDLTGGLPEV

ATPESEEAFT LPLLNDPEPK PSVEPVKSIS SMELKTEPFD

DFLFPASSRP SGSETARSVP DMDLSGSFYA LPLLNDPEPK

PSVEPVKSIS SMELKTEPFD DFLFPASSRP SGSETARSVP

DMDLSGSFYA GSSSNEPSSD SLSSPTLLAL

FIG. 44

SGWESYYKTEGDEEAEEEQEENLEASGDYKYSGRDSLIFLVDASKA

MFESQSEDELTPFDMSIQCIQSVYISKIISSDRDLLAVVFYGTEKDKNS

VNFKNIYVLQELDNPGAKRILELDQFKGQQGQKRFQDMMGHGSDY

SLSEVLWVCANLFSDVQFKMSHKRIMLFTNEDNPHGNDSAKASRAR

TKAGDLRDTGIFLDLMHLKKPGGFDISLFYRDIISIAEDED

♠107x178x4♠
♥ALLMOTI5♥
LVS PREDICTED COILED-COIL

♥LRVH *FEE ♠SSKLEDLLRKVRAKETRKRALSRLKLKLNKDIV* ISV

GIYNLVQKAL♥ KPPPIKLYRETN♠ EPVKTKTRTFNTSTGGLLLPSDTKR

SQIYGSRQIILEKEETEELKRFDDPGLMLMGFKPLVLLKKHHLRPSLFVYPE
ESLVIGS STLFSALLIKCLEKEVAALCRYTPRRNIPPYFVALVPQEEELDDQK
IQVTPPGFQLVFLPFADDKRKMPFTEKIMATPEQVGKMKAIVEKLRFTYRS
DSFENPVLQQHFRNLEALALDLME

♣PI2LZIPC♣
♣PEQAVDLTLPKVEAMNKRL♣ GSLVDEFKELVYPPDYNPEGKVTKR
KHDNEGSGSKRPKVEYSEEELKTHISKGTLGKFTVPMLKEACRAYGLKSG
LKKQELLEALTKHFQD

FIG. 45

GGGALSPQHSAVTQGSIIKNKEGMDAKS

♠107x178x4♠
♥ALLMOTI5♥
♥♠LTAWSRTLVTFKDVFVDFTREEWKLLDT♠ AQQIVYRNV
MLENYKNLVSLGYQLT♥ KPDVILRLEKGEEPWLVEREIHQETHPD
SETAFEIKSSVSSRSIFKDKQSCDIKMEGMARNDLWYLSLEEVWKCR
DQLDKYQENPERHLRHQLIHTGEKPYECKECGKSFSRSSHLIGHQKT
HTGEEPYECKECGKSFSWFSHLVTHQRTHTGDKLYTCNQCGKSFVH
SSRLIRHQRTHTGHKPYECPECGKSFRQSTHLILHQRTHVRVRPYECN
ECGKSYSQRSHLVVHHRIHTGLKPFECKDCGKCFSRSSHLYSHQRTH
TGEKPYECHDCGKSFSQSSALIVHQRIHTGEKPYECCQCGKAFIRKN
DLIKHQRIHVGAETYKCNQCGIIFSQNS

♣P23LZIPC♣
♣PFIVHQIAHTGEQFLTCGNQCGTALVNTSNLIGQTNHI♣ RENAY

FIG. 46

Residue -438	P	D	A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M	-488	#	Average IC80	CD
Mouse Ed. 178-like walk																																																					
T-252A0	P	D	A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	D																					
T-253A0		D	A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A																					
T-254A0			A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K																				
T-255A0				V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L																			
T-256A0					Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L																		
T-257B1,C1						L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E																	1.38 ug/ml	.
T-258B1							H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S															.343 ug/ml	.
T-259B1								R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S															1.78 ug/ml	.
T-260B1									I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S													.186 ug/ml	.
T-261A0										D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D													◆	.
T-262B1											L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q												.193 ug/ml	.
T-263B1												G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I											1.32 ug/ml	.
T-264B1													P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L										1.01 ug/ml	.
T-265B1														P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R									.072 ug/ml	.
T-266A0															I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S									.	.
T-267A0																S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M									+/-	.
T-268A0																	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M	K	.									◆	.

FIG. 47

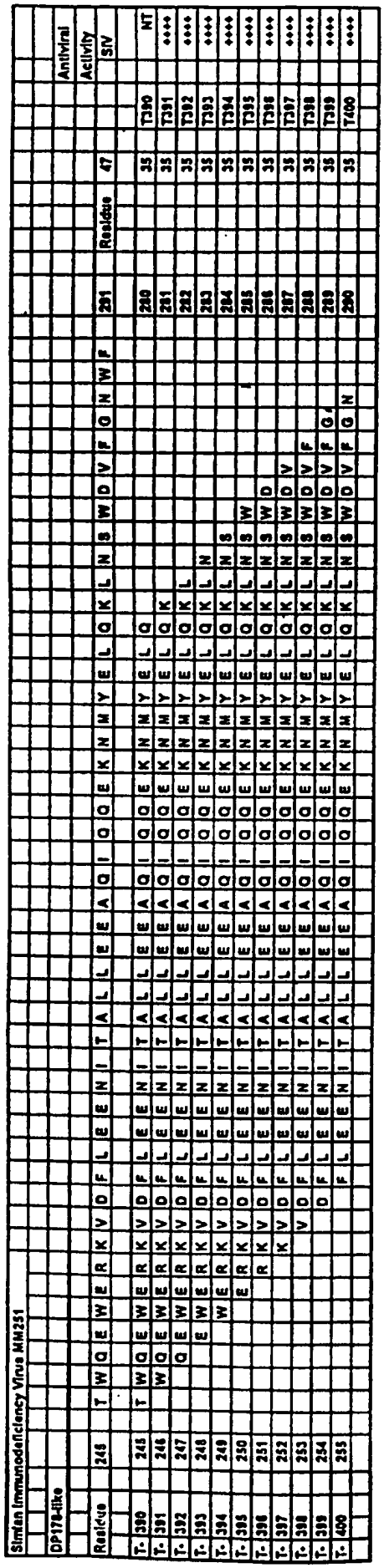

Simian Immunodeficiency Virus MM251
DP178-like
Antiviral Activity
Residue
SIV
Residue 47
T- 390
T- 391
T- 392
T- 393
T- 394
T- 395
T- 396
T- 397
T- 398
T- 399
T- 400
T390
T391
T392
T393
T394
T395
T396
T397
T398
T399
T400
NT
++++

FIG. 48

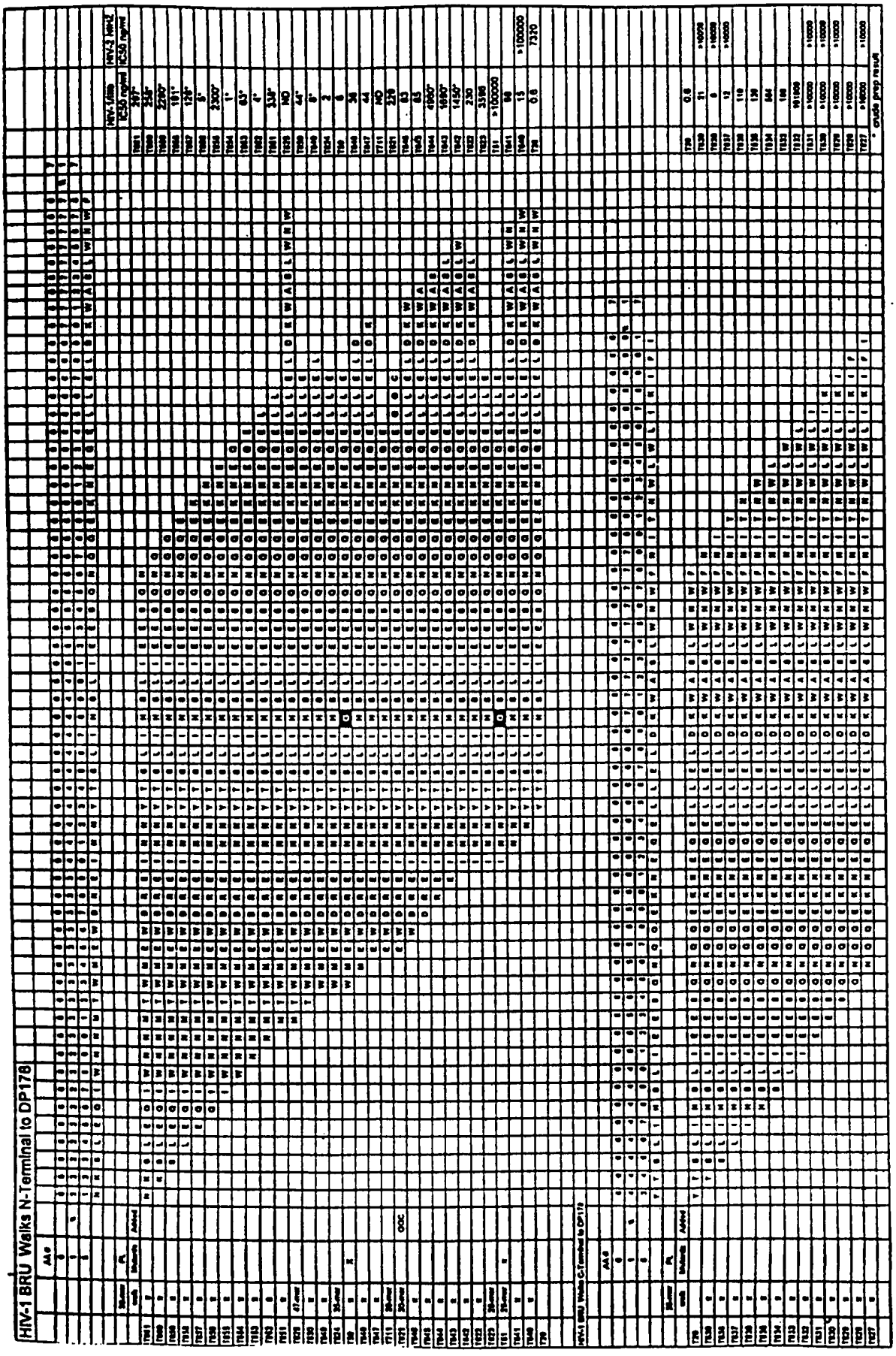


FIG. 49A

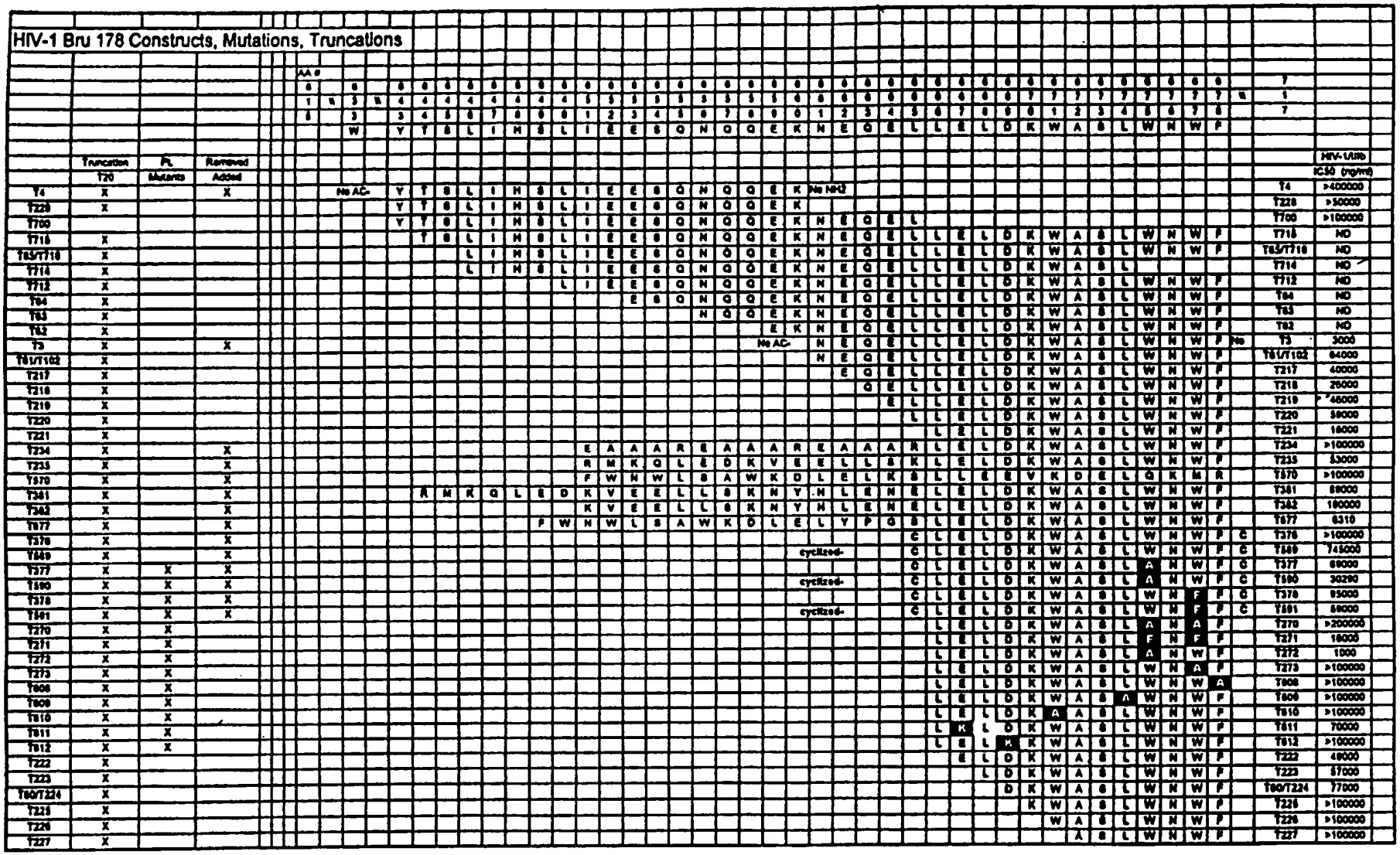

HIV-1 Bru 178 Constructs, Mutations, Truncations
Truncation
T20
PL Mutants
Removed
Added
HIV-1/IIIb
IC50 (ng/ml)
No AC
No NH2
cyclized
T4 >400000
T229 >50000
T700 >100000
T716 ND
T85/T716 ND
T714 ND
T712 ND
T84 ND
T83 ND
T82 ND
T5 3000
T81/T102 64000
T217 40000
T218 20000
T219 46000
T220 50000
T221 16000
T234 >100000
T235 53000
T670 >100000
T381 69000
T382 190000
T677 6310
T378 >100000
T689 745000
T377 69000
T690 30290
T378 95000
T691 69000
T270 >200000
T271 16000
T272 1000
T273 >100000
T808 >100000
T809 >100000
T810 >100000
T811 70000
T812 >100000
T222 49000
T223 87000
T80/T224 77000
T225 >100000
T226 >100000
T227 >100000

FIG. 49B

HIV-1 Bru 178 Constructs, Mutations

	PL Mutants	Removed Added		HIV-1/IIIb IC50 (ng/ml)
T585		X		112
T574		X	C13H27CO-	ND
T680		X	Free Termini	70
T573		X	No Ac-	ND
T84		X	Dig-	ND
T83		X	Biotin-	15
T706		X	Biotin-NH(CH2)6CO-	ND
T707		X	Biotin-NH(CH2)4CO-	ND
T20				0.8
T95	X			43
T96	X			1
T97	X			2
T98	X			10
T99	X			36
T103	X			ND
T212	X			3
T213	X			25
T214	X			19
T215	X			23
T216	X			1000
T229	X			>100000
T230	X			6
T231	X			4
T379	X			0.3
T701	X			3
T702	X			36
T703	X			0.5
T704	X			810
T705	X			14
T706	X			66
T156	X			80000
T89	X			>100000
T90	X			>100000

FIG. 49C

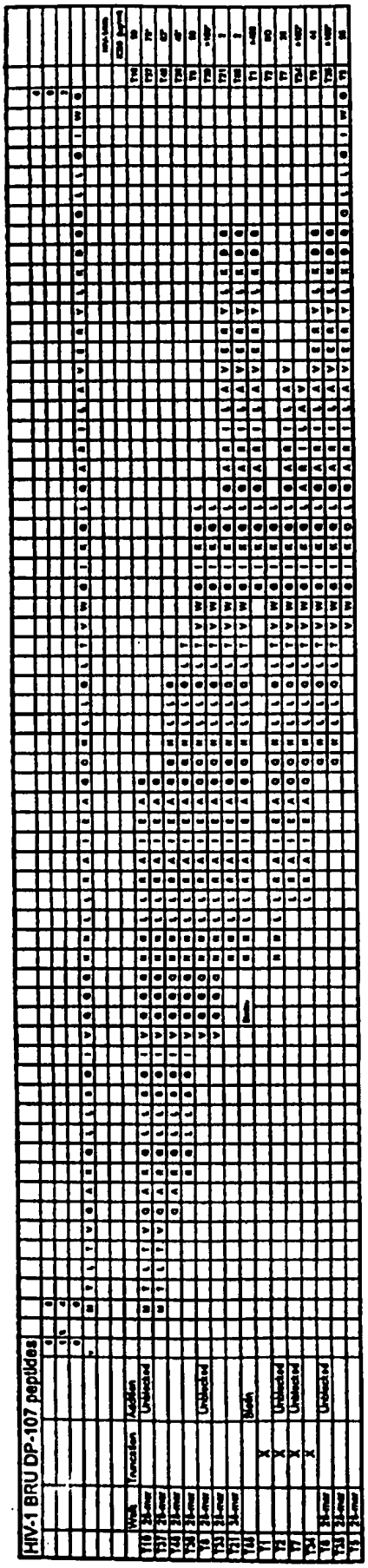

HIV-1 BRU DP-107 peptides
Web
Inhibition
Addition
Unblocked
Both
Unblocked
Unblocked
Unblocked
Unblocked

FIG. 50

EPSTEIN-BARR VIRUS STRAIN B95-8 BZLF1 TRANSACTIVATOR PROTEIN EB1 OR ZEBRA

Residue	173	S E L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L	219		
				ACT	Res
T-423	173	S E L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K	208	+ + +	35
T-424	174	E L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S	209	-	35
T-425	175	L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S	210	-	35
T-426	176	E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E	211	-	35
T-427	177	I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N	212	-	35
T-428	178	K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D	213	-	35
T-429	179	R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R	214	-	35
T-430	180	Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L	215	-	35
T-431	181	K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R	216	-	35
T-432	182	N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L	217	-	35
T-433	183	R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L	218	-	35
T-434	184	V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L	219	-	35

Residue	185	A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D S	230	ACT	Res
T-435	185	A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K	220	-	35
T-436	186	S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q	221	-	35
T-437	187	R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M	222	-	35
T-438	188	K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C	223	-	35
T-439	189	C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P	224	+ + +	35
T-440	190	R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S	225	-	35
T-441	191	A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L	226	+	35
T-442	192	K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D	227	-	35
T-443	193	F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V	228	-	35
T-444	194	K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D	229	+	35
T-445	195	Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D S	230	+	35
T-446	196	L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D S I	231	-	35

FIG. 51A

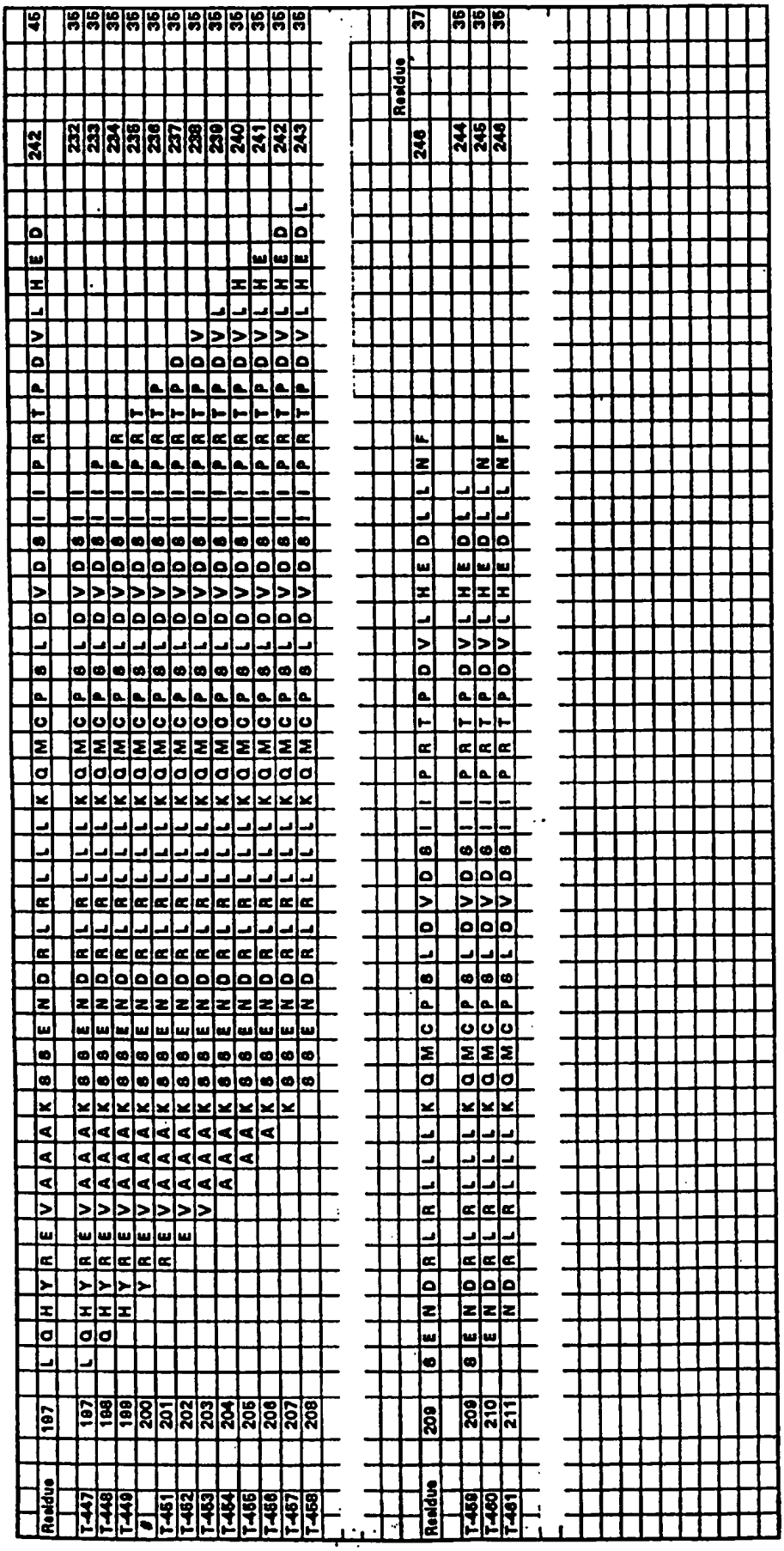


FIG. 5B

DOMAIN I:

174 P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-G-T-T-V-C-L-G-Q-N-S-Q-S-P 220

P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T
L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T
L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V
V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C
L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L
Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G
A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q
G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N
F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S
F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q
L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q-S

FIG.52A

DOMAIN II:

223 P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T 291

P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L

G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P

Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V

R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C

W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P

M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L

C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I

L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P

R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G

R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S

F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-G-G-S-S

I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T

I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S

F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T

L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G

F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P

I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C

L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R

L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T

L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C

C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M

L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T

I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T

FIG.52B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/16733

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :C07K 7/04,14/025, 14/16; C12N 9/94, 9/96, 9/98, 9/99
US CL :530/324; 424/184.1
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/324, 325, 326, 327, 328, 329; 424/184.1, 185.1, 186.1, 187.1, 188.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE, AIDSLINE, APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 89, Number 21, issued November 1992, Wild et al, "A Synthetic Peptide Inhibitor of Human Immunodeficiency Virus Replication: Correlation Between Solution Structure and Viral Inhibition", pages 10537-41, see entire document.	1-3, 9, and 10 ---------- 4-8 and 11-15

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 28 MARCH 1996	Date of mailing of the international search report 09 APR 1996
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer JEFFREY STUCKER Telephone No. (703) 308-0196

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/16733

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 91, Number 26, issued December 1994, Wild et al, "Propensity for a Leucine Zipper-Like Domain of Human Immunodeficiency Virus Type 1 gp41 to Form Oligomers Correlates With a Role in Virus-Induced Fusion Rather Than Assembly of the Glycoprotein Complex", pages 12676-80, see entire document.	1-3, 9 and 10 ---------- 4-8 and 11-15
X -------- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 81, Number 24, issued December 1984, Collins et al, "Nucleotide Sequence of the Gene Encoding the Fusion (F) Glycoprotein of Human Respiratory Syncytial Virus", pages 7683-87, see pages 7683 and 7685.	1 and 4 ---------- 9 and 11
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